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Facing Losses in Combat-Related Limb-
Loss:
A Classic Grounded Theory Study

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PhD 2019

Facing Losses in Combat-Related Limb-
Loss:

A Classic Grounded Theory Study

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A thesis submitted in partial fulfilment of the
requirements of Manchester Metropolitan
University for the degree of Doctor of Philosophy

Department of Nursing

Manchester Metropolitan University

2019

Abstract

Background: Combat-related limb-loss has been brought to the attention of the public and the political agenda due to the increased survival rates of injured veterans afforded by advances in body armour, better emergency treatment on the battlefield and improved evacuation methods. In the United Kingdom and United States, approximately 1900 veterans sustained an amputation as a result of the Iraq and Afghanistan conflicts. A dearth of qualitative studies currently exists in relation to combat-related limb-loss from the post-2001 conflicts, specifically in relation to the physical and mental wellbeing of veterans after amputation. In the UK, these veterans require long-term care from the National Health Service (NHS), therefore this research seeks to contribute empirical knowledge that health professionals can use to increase their awareness of the unique health care needs of veteran amputees.

Method: A classic grounded theory approach (Glaser, 1978; 1998) was adopted in this study which employs the use of coding, constant comparison, theoretical sampling and memoing. In line with the classic grounded theory methodology, multiple data sources were utilised such as face to face and online interviews, autobiographies, documentaries, YouTube videos, online blogs, newspaper/online articles, symposia and armed forces' charity websites and theatrical plays.

Findings: The substantive grounded theory of 'facing losses' details how veterans deal with their physical, mental and professional losses when they become injured and lose their limbs. In order to work to resolve these losses and move forward in their

rehabilitation, veterans go through a process of 'dealing with uncertainty', 'acceptance' and 'finding meaning'. The theory details the behaviours of veterans, from the frontline through to their rehabilitation and medical discharge. The theory of 'facing losses' contributes a unique conceptual understanding of the physical and psychosocial factors that impact on veterans' experience of limb-loss, which has not been noted in the wider literature.

Conclusion: The theory has generated insight into the complexities involved in sustaining combat-related limb-loss from the veterans' perspective. Specifically, a theoretical explanation as to how they face uncertainty, acceptance and finding meaning has been discovered. The theory of 'facing losses' has implications for health professionals who may be involved in the care of a veteran with limb-loss. By having an awareness of a veteran's experiences from becoming injured through to their rehabilitation and ultimate medical discharge will enable practitioners to better understand their history, experiences and behaviours towards dealing with adversity, and be able to provide appropriate care for this group of people.

Acknowledgements

I am an open book when it comes to living with bipolar disorder. I have faced many personal challenges during the course of my studies and I would not be the person I am today without the support and contributions from so many people. I am forever reminding myself of these wise words:

“It’s not how many times you get knocked down that counts. It’s how many times you get back up”

George A. Custer, U.S Military

My sincere thanks and respect go to all the veterans that gave up their time to make this study possible. Your ability to ‘adapt, improvise and overcome’ life-changing trauma is inspiring.

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Declaration

No portion of the work referred to in this thesis has been submitted in support of an application for another degree or qualification of this or any other university or institute of learning.

CHAPTER ONE:

Introduction and Overview to the Thesis

1.1 Rationale for the study

In clinical practice as a district nurse I cared for many people that experienced disease-related amputation and witnessed the rollercoaster of emotions that they encountered. When the Iraq and Afghanistan conflicts were happening, I often wondered what it must be like for soldiers to experience traumatic limb-loss. My father was a Corporal in the Royal Green Jackets of the British Army, but fortunately he did not suffer any injury in a conflict zone.

When I was registering my doctoral research, I knew that studying veterans with limb-loss would be a big undertaking but I wanted to understand their journey. My inquisitiveness became the impetus for the study and my research took me on the path to investigate combat-related limb-loss in veterans from the Iraq and Afghanistan conflicts, in the United Kingdom and the United States.

1.2 Aim and context of the research

This thesis sets out to explore the impact of combat-related limb-loss on veterans from the Iraq and Afghanistan conflicts, to render a theoretical understanding of veterans' experiences. To achieve this, the aim has been to uncover the patterns of behaviour (processes) that exist amongst veterans in order to produce a theory that is guided by the use of Classic Grounded Theory principles (CGT) (Glaser and Strauss, 1967; Glaser,

1978, 1998). Talbot, Brede and Metter (2017) explain that there is a lack of research investigating the rehabilitation period immediately following amputation. The findings of this study seek to inform education and practice of a veteran's unique journey, behaviours and experiences from the battlefield through to their medical discharge. In doing so, this will contribute knowledge to the field of combat-related limb-loss that is currently under-researched with regards to qualitative research.

1.3 Introduction

Amputations generally occur from a physical illness such as infections, peripheral arterial disease and diabetes, which is the leading cause of lower limb amputations in the UK (Diabetes UK, 2018). Recent analysis by Diabetes UK discovered a total of 26,378 amputations had been carried out in England; a 19.4% increase since 2013. Worsening peripheral arterial disease (PAD) contributes to the 5-6,000 major lower limb amputations carried in the NHS each year (Vascular Society, 2018). Although the majority of amputation occur in the lower limbs, the level of loss can vary greatly from a single digit to an entire limb in both an upper or lower limb. In lower limb-loss, a person can lose their toes, their entire leg and sometimes portions of their pelvis (Limbless Association, 2019).

In the context of the armed forces, the Ministry of Defence (2018) add that an amputation is the traumatic (accidental) or surgical removal of part of the body. The vast majority of amputation are a direct result of improvised explosive devices (IEDs) and during the Iraq and Afghanistan conflicts, traumatic amputations increased in frequency (Wallace, 2012), with these injuries mainly being caused by the tactics

employed by opposing forces. The advancements in first aid, personal protective equipment (body armour) and improved military medicine have led to an increased chance of survival, even in situations where veterans have suffered significant amputation to both their upper and lower extremities. However, despite personal protective equipment increasing veterans' chance of survival, the body armour in place still leaves their extremities at risk (Hildreth, 2009). This means that veterans arms and legs are particularly vulnerable in combat especially when there has been an increased use of IED's in Iraq and Afghanistan (Stinner et al, 2010). Therefore, veterans may survive their injuries, but are faced with the life-altering situation of living with limb-loss. Fitzpatrick and Pasquina (2010) confirm that there is clear data to show an improvement in survival rates of veterans with limb-loss in Iraq and Afghanistan when compared with other military conflicts in World War II and Vietnam. Specifically related to limb-loss, Perkins et al, (2012) explain that the percentage of surviving veterans with limb-loss has nearly doubled compared to previous conflicts.

The United Kingdom and the United States have suffered with a significant number of veterans with traumatic limb-loss. Studies in the United Kingdom and the United States identify that 50% of the injuries sustained by veterans were to their extremities (Belmont et al, 2010; Ramalingam, 2003). The statistics in the UK demonstrate that since 2001, 333 veterans have suffered traumatic amputations (Ministry of Defence, 2019) and Since 2002, approximately 1,700 US veterans have experienced traumatic amputations in the Afghanistan and Iraq conflicts (Fischer, 2015).

1.4 Political and clinical context

Although illness-related limb loss among older individuals accounts for the majority of amputations (Geertzen, Martina and Rietman, 2001), public awareness of traumatic limb loss has increased with the current media focus on combat injuries (Caddick and Smith, 2014; Phelps et al, 2008). Importantly, Hynes and Thomas (2016) raise awareness of Lord Ashcroft's (2012) report indicating that nine out of ten members of the public associated veterans leaving the military as having a physical, emotional or mental health problem. Hynes and Thomas further add that this belief stems from reporting in the press and misunderstandings of the resilience of veterans. Specifically, it is the military conflicts and associated trauma-related amputations that have resulted in increased attention and advances in prosthetics (Geiling, Rosen and Edwards, 2012; Thurston, 2007).

Since the Iraq and Afghanistan conflicts, a wave of veterans have been returning home with limb-loss that has impacted on the political and clinical arenas (Caddick et al, 2019). In particular, it is acknowledged that there will be a great increase in the number of veterans with limb-loss who will be discharged from the armed forces up until 2020 (Murrison, 2011), and will need lifelong prosthetic care when they transition to civilian life. However, Murrison (2011) adds that as of January 2010, commitments from the government to improve prosthetics for veterans had not been funded, placing the veteran's care on their local NHS limb centres, which were already struggling to meet demand with fixed resources. It has to be acknowledged that veterans with limb-loss wish to be as active as possible, which relies on the most

advanced technology and the highest quality of prosthetics care. These veterans are generally younger compared to civilians with limb-loss where 85% of veterans that experience limb-loss are under the age of 35 (Pasquina, 2010).

The Armed Forces Covenant in the UK recognises “those who serve in the Armed Forces, whether regular or reserve, those who have served in the past, and their families” (Ministry of Defence, 2019:1). Specifically, the covenant aims to ensure that they are treated fairly and are not disadvantaged because of their service. The covenant has made many accomplishments thus far, such as an increased number of ‘veteran friendly’ GP practices and securing funding (£13 million) for veterans’ mental health and wellbeing. Furthermore, over the current parliament (2020), the Armed Forces Covenant will be enshrined in law. The idea behind the legislation is that it will consolidate current arrangements in place that remove disadvantage and improve the consistency of covenant outcomes for the Armed Forces community (Ministry of Defence, 2019). Specifically, the recent formation of the Office for Veterans’ Affairs seeks to support veterans' physical and mental welfare coupled with their education and employment. The achievements made thus far in 2018/2019 clearly demonstrates a commitment to improving the lives of veterans, that includes their families as well. Specifically relating to the injured, the covenant seeks to ensure that these veterans receive special consideration in recognition of the sacrifices they have made for the country (Briggs, 2014a).

The Murrison report entitled ‘a better deal for military amputees’ (2011) also highlights the need for research in exploring the experiences of veterans with limb-

loss, in order to better understand how they can be cared for appropriately in both military and civilian services. Therefore, Briggs (2014b) published the Chavasse report that raises awareness of the variable quality and provision of care for veterans with musculoskeletal infirmity resulting from their military service, and posits solutions to improve care for injured veterans.

In response to the Murrison report in 2011, the Conservative and Liberal Democrat government made £11 million available over a two-year period between 2010-2015 (where nine identified limb centres could receive up to £6.7 million), to make advanced prosthetics readily available to veterans, and to improve rehabilitation services across the country (Ministry of Defence, 2013). The overall aim of this investment was for NHS limb centres to match the care offered from the armed forces' rehabilitation centres, such as Headley Court (DMRC).

Aside from traumatic limb-loss that occurs on the frontline, there are a band of veterans that sustain serious injuries but do not lose their limbs on the frontline. These veterans face a long and arduous process in search of healing, but often surgical and medical interventions fail, resulting in them facing the decision to undergo late amputation of their limbs (Melcer et al, 2017).

Even though allied troops have started to wind down and withdraw from Iraq and Afghanistan in 2014 (Edwards et al, 2015), it is important to recognise the enduring burden that veterans' injuries have imposed on them. These life-changing wounds of war require a commitment from the UK and US' healthcare and rehabilitation services

for many years to come, in order to help veterans in their adjustment to limb-loss and give them the means to live a life they deem acceptable. Numerous advancements in prosthetics over the past 10 to 20 years have allowed veterans with amputations to achieve functional goals not previously possible (Isaacson et al, 2010). These improvements include advances in the components of the prosthesis such as artificial limb attachment systems, newer socket designs, and the use of different materials to improve cushioning of the limb (Thurston, 2007).

1.5 Organisation of the thesis

A theory of how veterans with limb-loss deal with uncertainty, acceptance and finding meaning from their injuries resulting from the Iraq and Afghanistan conflicts.

This thesis has six chapters. The second chapter details the methodology I adopted for this study. Chapter three presents the data analysis procedures. Chapter four provides the findings of the study. Chapter five presents the discussion and chapter six concludes the thesis. I explain the structure of the thesis in more detail below.

In chapter two the historical context of grounded theory is provided which includes the methodological separation of ideas between the two originators of the method, and the current variants of the method are presented. A justification of opting to use a classic grounded theory approach is outlined, and the research aim and objectives are provided. Next, a brief discussion relating to trustworthiness of the research will be given. Following this, the ontological and epistemological assumptions of the research are articulated. There is a discussion surrounding the use of extant literature in a

classic grounded theory study, and the reasoning behind why I chose to identify my preconceptions before data collection is illuminated. The following sections describe the sources of data, the data collection process, ethical considerations and the decision-making on the use of computer-assisted software for data analysis.

In chapter three the processes of classic grounded theory are made explicit, as it is necessary to outline the applications of classic grounded theory methods in order for the reader to understand the intricacies of the study. Specifically, open and selective coding, constant comparison, theoretical sampling, being theoretically sensitive and writing memos which are then sorted into a theory are outlined. Examples of the aforementioned processes are also given to show how the methods were used to generate the theory.

Chapter four explores the key findings of this study and is presented in a format similar to that seen in grounded theory studies (Thomas, 2013; Yalof, 2012; Elliott, 2007) where one writes about the categories as a theory of explanation (Glaser, 2012; 1998). The main concern of veterans and the basic social process that veterans engage in will be provided. By engaging in the cyclical processes of data collection, coding, conceptualisation, constant comparison, theoretical sampling and memoing, the substantive theory evolved. To ensure grounding of the data it was deemed necessary to present the data in a traditional manner, therefore extracts from the raw data are used to support the emerging theory.

Chapter five provides an in-depth discussion of this study's findings and compares them to extant literature on loss, chronic illness and disability theories. Specifically, the categories/stages (dealing with uncertainty, pragmatic acceptance and finding meaning) and their properties will be presented, and they will be conceptual in their explanation in line with classic grounded theory principles, with both the findings and extant literature woven together (Thomas, 2013).

Chapter six provides the recommendations for further research, education and practice. Next, I will illuminate the limitations of the study and will include some researcher reflections regarding the study before drawing the conclusion.

CHAPTER TWO:

Research Methodology

2.1 Introduction

This chapter begins by detailing my engagement with the different qualitative research methodologies that led me to adopting grounded theory (GT). Next, the origins of GT are provided which I trace back to Barney Glaser and Anselm Strauss in the late 1960's. The methodological disagreement between the originators will be identified and the resultant variants of GT will be discussed. The rationale for opting to use Glaser's Classic Grounded Theory (CGT) approach will be provided. A brief discussion of the ontological and epistemological assumptions in which this research is positioned will be outlined. The methodological processes of CGT will be detailed with some explication around the use of extant literature. Next, I will write about how and why I highlighted any preconceptions I held professionally and personally. The subsequent sections describe my sources of data, the data collection process, the ethical considerations for the research and lastly, a brief discussion on the use of computer assisted software for data analysis is provided.

2.2 Methodologies

Miller (2010:191) explains that in qualitative research, the researcher acts as the data collection instrument and attempts to answer questions about "how or why" a specific phenomenon occurs. Furthermore, Hammarberg, Kirkman and de Lacey (2016) add that qualitative methodologies are best suited to answer questions about meaning,

experience and perspective from the viewpoint of participants. I perceived that it would be beneficial to further explore aspects of veterans' behaviour, such as how they experienced aspects of their lives, and how they interacted with others. Ploeg (1999) and Hall (2006) helped me to understand that the three most common qualitative approaches to research in nursing are ethnography, phenomenology and grounded theory.

In an effort to increase my understanding of ethnography, I read literature about the methodology and how studies tended to be carried out. Specifically, Schwandt (2007) defines ethnography as the process and product of describing cultural behaviour. As my research was exploratory, an ethnographic study seemed feasible, but the research would focus specifically on culture (Coughlin, 2012). I thought more about the methodology and determined that I did not want to enter veterans' lives studying culture alone, and looked towards phenomenology and grounded theory.

Dowling (2007) provides guidance on how to use Phenomenology and there is no argument that it produces insightful research in the health and education arenas e.g. Jack (2017) and Walsh and Gethin (2009). Similarly, Birks and Mills (2011) provide a step-by-step approach to generating a grounded theory and there is a plethora of examples of developed grounded theories in nursing e.g. Prokop (2019) and Tierney et al (2017).

In an attempt to understand more about the similarities and differences of phenomenology and grounded theory I read a helpful article by Gelling (2011) who

explains that both approaches collect and analyse data from the participants' perspective and attempts are made to ensure that their findings are not influenced by preconceived ideas. I discovered that the goal of grounded theory is to explain social processes or actions (Sbaraini et al, 2011), whereas phenomenology seeks to find the essence or common themes in participants' experiences (Padilla-Diaz, 2015). Therefore, although disparate in their aim, both approaches facilitate a deeper understanding of participants' lives.

Salmon (2012) identifies the struggles novices can have in choosing a qualitative research methodology and I anguished for a period of time. Both methodologies would provide an answer to the research aim, which was to explore the impact of combat-related limb-loss on veterans, however grounded theory allowed insights that were not primarily the goal of phenomenology.

I read many interesting grounded theories, but one in particular that confirmed my decision to adopt a grounded theory approach was a study by Satinovic (2009) about 'moving on in a changed life' for individuals with multiple sclerosis (MS). Satinovic writes about the stages MS sufferers went through to try and have a good life while living with a long-term condition.

I secured a place at a CGT troubleshooting seminar in Ireland in 2013 and this experience had a dramatic impact on me. The seminar opened up a plethora of methodological support for a novice researcher, such as a dedicated journal called the Grounded Theory Review (<http://groundedtheoryreview.com/>) and an extensive list of

books written by Dr Barney Glaser (co-originator of the grounded theory method). I trawled the journal and began reading the *Discovery of Grounded Theory* (1967) and *Theoretical Sensitivity* (1978). Things seemed to fall into place when I was immersing myself in the CGT literature, particularly the notion that human behaviour is patterned and the method seeks to look for these patterns in the behaviour of participants in a specific substantive area. I read several CGT theories in the journal and one that was particularly influential in my decision-making was Evelyn Gordon's (2011) theory of 'Re-vitalising worthiness: A theory of overcoming suicidality'. This research had a major influence on me from the moment I read it as suicidality and limb-loss are both life-altering conditions, and I could visualise how my study could be guided by Evelyn's work. I was also drawn to this research on a personal level as I live with bipolar disorder and have a long history of suicidality.

2.3 Discovering grounded theory

2.4 Historical perspectives of grounded theory as a methodology

2.4.1 Background and origins of grounded theory

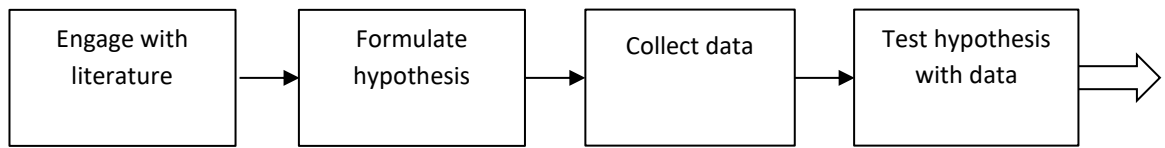
In order to determine whether CGT would be a suitable methodology to meet the research aim and objectives of the study, I started with its origins by reading the text: 'Discovery of Grounded Theory' written by Barney Glaser and Anselm Strauss in 1967. Prior to this, they collaborated on a study which explored dying in hospitals and afterwards published a book about this called 'Awareness of Dying' (Glaser and Strauss, 1965). Glaser (1998) explained that they were frequently asked about *how* they carried out the study and felt there was a need write the methodology for it; so

the 'Discovery' book was written. Furthermore, Glaser explains how he was heavily influenced by Paul Lazarsfeld during his time at Columbia University and sought to codify qualitative research in much the same way as Lazarsfeld codified quantitative research.

The 'Discovery' book responded to an overemphasis on "verification of theory" (p.10) that seemed to dominate sociology at the time. Specifically, it challenged the hypothetico-deductive approach to research which insisted on clear cut theories or hypotheses that tended to take place before data collection. In fact, Glaser and Strauss argued that forming a theory meant that the hypotheses come from the actual data itself through a systematic research process (diagram 1). Specifically, they felt that the dominance of verification was fuelled by the perception that there were enough existing theories generated by previous sociologists e.g. Marx, Durkheim and Mead that covered a suitable amount of areas of social life to last for a long while (Glaser and Strauss, 1967). They went on to indicate that this impacted on the teaching of students where they were taught about leading researchers' theories and were trained to test, not question theories through verification. Glaser & Strauss (1967:11) contested these beliefs and postulated that:

"...some theories of our predecessors, because of their lack of grounding in the data, do not fit, or do not work, or are not sufficiently understandable to be used and are therefore useless in research, theoretical advance and practical application".

Traditional research method



Grounded theory method

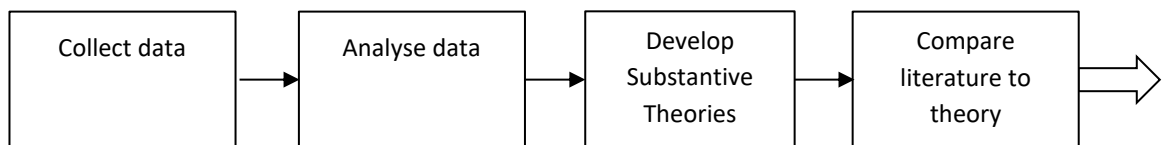


Figure 1: Traditional research method and Grounded Theory method

Through their collaboration, they produced a method that researchers could use to form a substantive theory grounded in the data through systematic processes. The book emphasised that theory which works and is relevant to the research area should be found in the data through legitimate conceptualisation as oppose to testing concepts from grand theories, or from the extant literature (Glaser, 1998).

2.4.2 The methodological divergence of Glaser and Strauss

After co-authoring the 'Discovery' book, Glaser added to the original book by writing 'Theoretical Sensitivity' in 1978 which explained GT processes in great detail such as theoretical sampling, coding and memos, and Strauss wrote the book 'Qualitative Analysis for Social Scientists' in 1987 which was long after the original book was published. Their differences concerning GT methodology were clearly seen when Strauss and Corbin (1990) published their book 'Basics of qualitative research:

Grounded theory procedures and techniques' and in response, Glaser (1992) produced 'Basics of Grounded Theory Analysis: Emergence vs Forcing' which strongly argued that Strauss and Corbin's approach was not GT, but instead was a completely new method which he termed 'conceptual description'.

When looking at the two perspectives it took me a little while to recognise the differences between the approaches as they both incorporated similar processes of coding, memoing, theoretical sampling and constant comparison. However, as I read more closely, I noticed that it was *how* these were carried out and was largely related to data analysis in the coding process (Walker and Myrick, 2006). Specifically, Strauss and Corbin's approach incorporates "axial coding" and a "conditional/consequential matrix" (1998:181) which they deem useful to building the theory. Kelle (2005) acknowledges that a coding paradigm like Strauss and Corbin's may be helpful to a novice researcher who wants clear guidance on structuring data, but Glaser (1992) indicates that this forces theoretical concepts into the data with no consideration of whether they are relevant to the emerging theory. Also, as I read further, I found that open and selective coding, and the use of a core category meant very different things which were initiated at different times in the methodology. After much thought I concluded that each approach prescribed a very different set of GT procedures, but Heath and Cowley (2004) support the viewpoint that Glaser is more closely aligned to the original intent of the methodology with Strauss and Corbin providing a reformulation of the methodology (Walker and Myrick, 2006). Since 1992, Glaser has written subsequent books seeking to advance the methodology (1998; 2001; 2003; 2005; 2009; 2011; 2012); and to explain the eroding effect that constant remodelling

of the methodology has had on its conceptual power (Glaser and Holton, 2004).

Furthermore, Christiansen (2008) adds that GT “has become a name, not for one method, but for an array of very different research approaches” and argues that classic grounded theory is fundamentally different from the rest where the emphasis on emergence of theory seems to have been forgotten. Similarly, Partington (2002:136) acknowledges that grounded theory has taken a more generic meaning for all approaches that code data which has resulted in a “loss of attention to the essential principles of the Glaser and Strauss approach, and to their purpose”.

It was useful to look into the essential components of a classic grounded theory study from its origins and Charmaz (2006) documents that it includes:

- Simultaneous involvement in data collection and analysis
- Constructing analytic codes and categories from data, not from preconceived logically deduced hypotheses
- Using the constant comparative method, which involves making comparisons of incidents in the data and generated concepts, during each stage of the analysis
- Advancing theory development during each step of data collection and analysis
- Memo-writing to elaborate categories, specify their properties, define relationships between categories, and identify gaps
- Sampling aimed toward theory construction, not for population representativeness
- Conducting the literature review *after* developing an independent analysis

2.4.3 Considering the grounded theory approaches

Understanding the differences between the different GT perspectives and making a methodological decision can be challenging for novice GT researchers (Cooney, 2010; Christiansen, 2007; Backman and Kyngas, 1999). The most difficult part for me was looking into the methodological literature and finding a wealth of studies that indicated using a grounded theory approach as the guiding methodology, but finding it had been used in very diverse ways. Cutcliffe (2005), supports this view in that studies claiming to adopt a grounded theory approach are often very methodologically dissimilar from its principles; specifically, in relation to Glaser's approach. In particular, I found that certain steps in the methodology were sometimes ignored or vague, for example, a failure to start the study with a research interest as oppose to research question, or there being no indication of theoretical sampling. Similarly, Suddaby (2006:633) postulates that:

grounded theory is often used as rhetorical sleight of hand by authors who are unfamiliar with qualitative research and who wish to avoid close description or illumination of their methods. More disturbing, perhaps, is that it becomes apparent, when one pushes them to describe their methods, that many authors hold some serious misconceptions about grounded theory.

Therefore, it was not surprising that I found myself in a state of methodological confusion. However, the situation improved when I came across the 'Grounded Theory Review' online journal (<http://groundedtheoryreview.com>) that was dedicated to CGT, and I was able to see how the methodology was being used according to its underlying principles, which were pivotal to my learning.

Ultimately, it would have been equally possible to adopt any of the approaches to the research area, but after much deliberation Strauss and Corbin's approach was put aside on the basis that despite it being the most explicit in its guidelines which may be helpful as a novice researcher; the processes felt too restrictive. This is a viewpoint Melia (1996:376) supports indicating that their data analysis process is complex and that the "technical tail is wagging the theoretical dog". However, Strauss and Corbin (1998:4) revised their data analysis procedures and insisted that what they had advised were to be interpreted as "guidelines, suggested techniques but not commandments". Despite this reassurance, I still found their coding procedures too prescriptive and felt it lacked an element of researcher creativity which Glaser's and Charmaz's approaches seemed to offer (Glaser, 1998; Charmaz, 2006).

Again, I looked back at the research aim and my first priority was to carry out a meaningful study; and one that would allow these veterans the ability to voice their concerns. It was then my intention as a researcher to understand *how* they are dealing with their concerns or problems. Again, this was difficult as both methodologies were usable and could provide a meaningful theory. Eventually I concluded that neither methodology was superior and they both sought to provide a theory, but achieved this through their own methodological processes. Similarly, Guthrie and Lowe (2011:47) talk about the need to avoid getting "derailed by the circular argument as to which GT version is the best one to use"; a situation Glaser has frequently called the rhetorical wrestle (Glaser, 1998).

I definitely did not want to take a 'pick and mix' approach (Breckenridge et al, 2012) as the processes were very different and incompatible e.g. the importance of a core category is pivotal in Glaser's approach but not necessary in Charmaz's, which is addressed previously. Glaser (1978:93) articulates that grounded theory investigates a pattern of behaviour that is problematic for a group of people. He further adds that without a core category the theory will "drift in relevancy" and it is the core category that accounts for most of the variation in people's behaviour. I found the core category inviting as I am a person who likes structure and it seemed critical to theory-building.

So, the identification of a core category is a priority in CGT which resolves a main concern in the substantive area that emerges when the empirical data are subjected to the systematic iterative process of coding, constant comparison, memoing and theoretical sampling to identify patterns in their behaviour. However, Charmaz (2004:982) argues that people often cannot tell us what most concerns them in the substantive area and argues that "the most important processes are tacit". Therefore, she postulates that in order to learn and understand people's meanings this requires reflexivity, bracketing and rationality from the researcher, and the presence of a core category is not necessary in her approach to GT.

Despite Charmaz (2006:148) provides a useful statement where "neither positivist nor constructivist may intend that readers view their written grounded theories as *Theory*...Instead they are just doing grounded theory in whatever way they understand it". Hernandez and Andrews (2012:62) finalised my thinking in making a clear differentiation between the actual product of each perspective whereby:

...they both produce a theory but “[t]he constructivist grounded theory is a rich, descriptive theory that captures the “core social and psychological processes”...In classic grounded theory, the research product is an explanatory theory which explains how the problem of the substantive area is continually being processed, solved or resolved.

Furthermore, Breckenridge et al (2012) add that CGT provides a conceptual understanding of social behaviour as oppose to the constructivist focus on interpretive understandings of participants’ meanings.

2.4.4 Charmazian grounded theory methodology

Charmaz (2004; 2006) provides a third way of doing GT called *constructivist* GT which centres on the mutual creation of knowledge by the researcher and the researched to produce interpretive understandings of people’s meanings (Charmaz, 2000). She advocates that this approach uses the “basic grounded theory guidelines with twenty-first century methodological assumptions and approaches” (Charmaz, 2006:9). She consistently places Glaser’s and Strauss and Corbin’s approaches in the positivist realm but feels that neither data nor theories are discovered, and postulates that her approach is coherent with the theoretical and methodological developments of the past four decades. In particular she advocates a symbolic interactionist perspective in Grounded Theory when analysing data. Furthermore, she argues that the ‘Discovery’ book promoted flexible GT strategies. However, despite acknowledging the development of the methodology, Glaser (2002) argues that the constructivist approach has also remodelled the original intent of GT where the researcher’s interpretation of the main concern takes precedence over the main concern and its

resolution that is relevant to the substantive area. Moreover, Glaser agrees with Charmaz that data and theories are not just discovered; they are developed through the iterative methodological processes of constant comparison, theoretical sampling and checking for adequate fit (Glaser, 2002).

I believed the classic grounded theory approach would be ideal because it is inductive and investigates relationships and behaviours of people, also known as social processes (Noble and Mitchell, 2016; Glaser, 1992)

2.5 Research question and choosing the grounded theory approach

Due to there being limited experiential empirical knowledge of combat-related limb-loss, an open approach has been used to identify the aim and objectives for the study. In doing so, participants would be able to direct the research to areas that are important to them.

The research aim was:

'To explore the impact of combat-related limb-loss in veterans from the Iraq and Afghanistan conflicts.'

To investigate this question the study's objectives were:

- 1) To generate a grounded theory that could explain the processes involved in becoming an amputee

- 2) To contribute knowledge to the research base regarding combat-related limb-loss

When thinking about the research aim and objectives a CGT approach would be conceptualising one main concern for the amputees and how they continually process, solve, or are resolving this concern by focusing on one core category. Once the core category was chosen, the study would be delimited and would centre on developing concepts that are only relevant to the core category (Glaser, 1978). This was a little unnerving as I was mindful of other important concerns that may be brushed aside but Glaser (1998) acknowledges that CGT will not account for all the behaviour in an area, but it will account for one behaviour of relevance to the participants in the substantive area. Therefore, on this basis I thought that CGT could fulfil the research aim and objectives as I would be able to focus on the multiple perspectives of amputees, identify a concern of importance to *them*, and build a conceptual theory around how this concern is being addressed or resolved. I then turned my attention to Charmaz's approach and felt that this would also identify the challenges amputees face, but it would not centre upon latent patterns of behaviour, or finding one main concern and a core category. Instead the emphasis would be around eliciting veteran's multiple perspectives around limb-loss and seeking to understand their meanings which would aim to provide "an *interpretive* portrayal of the studied world, not an exact picture of it" (Charmaz, 2006:10).

Appreciating that both approaches do produce a theory, I made the decision that a CGT approach was appropriate due to its primary focus on conceptualising a pattern of

behaviour, to produce a conceptual understanding of a concern and its resolution, that would aim to be relevant to veteran amputees (Holton, 2008; Glaser, 1978).

2.5.1 Trustworthiness of the data

Lincoln and Guba (2000) argue that qualitative research cannot be judged on the positivist notion of validity, and should rather be judged on an alternative criterion of trustworthiness. Furthermore, Aldiabat, and Lavenec (2018) explain that when using GT there is a need to illuminate the specific strategies used in the study to demonstrate the trustworthiness of the findings. As explained in this chapter I made the decision to adopt one GT method i.e. the CGT approach, rather than add to the 'method slurring' that pervades the GT literature (Thomas, 2013; Baker, Wuest and Stern, 1992). First, trustworthiness in my study was achieved through attending four CGT troubleshooting seminars with fellows from the CGT institute and also having a Grounded Theorist as part of my supervisory team. This enabled me to have the support to help facilitate my research (through sharing the theory development, mentoring and supervision and receiving feedback) thus avoiding minus-mentoring i.e. where a student learns GT solely through reading a book, which Stern (1994) argues has caused an erosion of methodology.

Scott (2019) provides clear evaluation criteria for evaluating a CGT study:

- What is the substantive area of interest?
- What comprise the data sources?

- Was data collected in a manner that was consistent with Grounded Theory. If it wasn't, how was data collected ... what impact will that have had?
- Was constant comparison conducted?
- Was theoretical sampling conducted?
- Are the codes, concepts or descriptive codes?
- What is the main concern?
- What is the core category? And what are the related categories?
- What do people do? What varies what people do?
- Is there theoretical completeness and conceptual integration?
- Has the literature been sampled and integrated into the theory?
- Which GT books have been read?

In support of the above criteria, in a review of qualitative methods, Murphy et al (1998) identify that one should look at the research methods and consider the extent to which the likelihood of error has been limited. I believe that this thesis aims to provide a clear description as to how the research was carried out in congruence with a CGT approach.

Hammersley (1992) postulates that determining 'quality' in research should lead to the question of whether the research findings represent those features of the phenomena it aims to describe and explain. I hope that readers of this thesis will recognise the relevance of the findings to veterans with limb-loss from the Iraq and Afghanistan conflicts.

One of the other factors that relates to quality is the steps taken to ensure data saturation, or in CGT terms, theoretical saturation (Tay, 2014; Glaser and Strauss, 1967). In my study, theoretical saturation was achieved through a gradual process that is described in chapter three.

2.5.2 Philosophical and epistemological stance of the study

The Discovery Book (1967) clearly identifies that it sought to challenge the positivistic research culture at the time to bridge the gap between theory and research, but in this book Glaser and Strauss did not mention the philosophical underpinnings, which has been a source of much debate over the years (Morse, 2009). Nathaniel (2011) explains that constant discussions surrounding the method's ontological, epistemological and methodological underpinnings has led to the erosion and remodelling of grounded theory. Specifically, Mills, Bonner and Francis (2006) explain how grounded theory has been moulded to fit different philosophical positions such as constructivism, feminism and critical thinking.

I took a step back and thought more about philosophical underpinnings in research and started to read more into this area. Annells (1996:379) argues that decisions surrounding a research question in research will depend upon the researcher's worldview and explains that:

the [research] question arises from the researcher's notions about the nature of reality, the relationship between the knower and what can be known, and how best to discover reality.

She explains further that a researcher will often choose a method based on the individual's basic philosophical beliefs about inquiry and postulates that the researcher should have a comfortable fit with the adopted method. Walsham (2006) supports this notion of 'fit' and encourages researchers to choose an approach that they find insightful and engaging. I felt this way when reading the 'Discovery' book where I found that I could start to see how it could work for the substantive area of combat-related amputation and it motivated me to read more of the methodological literature.

This led me to the areas of ontology and epistemology, but when reading CGT literature these concepts were never mentioned. After reading the literature surrounding ontology and epistemology, it was clear that I needed to have some awareness of philosophical terminology especially when carrying out qualitative research and state my position, as it provides the reader with an idea of the analytical lenses the researcher has adopted when scrutinising the data (Mills, Bonner and Francis, 2006).

I then came across the work of Guba & Lincoln (1994) who provided me with an easily digestible explanation that made sense to me. They explained that ontology was concerned with the form and nature of 'realities' and what we assume about their existence. This led me to the two opposing perspectives of realism and relativism in research. Realism argues that 'being' truly exists independently of human perception (Phillips, 1987) and reality is therefore viewed as objective and measurable, whereas

relativism challenges the objectivity of reality and argues that reality is subjective as it is affected by differences in human perception (Guba & Lincoln, 1994).

Epistemology is the study of how knowledge of 'reality' can be sought (Blaikie, 1993) and specifically determines the beliefs about the interaction between the researcher and the reality. Furthermore, Guba & Lincoln (1994) explain that epistemological choices are likely to be informed by the researcher's prior ontological assumptions.

Specifically, in GT research Urquhart (2001:19) postulates that as grounded theory "is an inductive, emergent method that is located mainly in post-positivism, this means that researchers need to carefully consider their own philosophical position". So, taking this into account and the prior work of Guba (1990) I sought to discover my own worldview which would help to demonstrate both my research development and the importance of rigour when using a GT approach (Norton, 1999). At first glance, an ontological positioning of this research is one of relativism as I will come across multiple realities from veterans which can be aligned with the underpinnings of Charmaz's constructivist GT. However, on closer examination of CGT and constructivist GT the obvious difference is in what they seek to achieve, where CGT centres on moving from description to conceptualisation of behaviours (Glaser, 1998).

Furthermore, the researcher discovers a main concern in the substantive area, and how this concern is resolved through identifying a core category and formulating an explanatory theory. Conversely, Charmaz (2003:250) does not advocate a core category and focuses on the "mutual creation of knowledge by the viewer and viewed, and aims toward an interpretive understanding of subjects' meanings".

This led me to question whether it was appropriate to position CGT in a relativist ontology and through further reading this was unclear. For instance, Charmaz (2006) argues that CGT is objectivist as it focuses on a latent pattern of behaviour which may be viewed as searching for truth; however, Breckenridge et al (2010) acknowledge this viewpoint but indicate that truth is not the aim, more so it is about providing plausible explanations about participants' behaviours. At this point I began to move away from placing CGT in a purely relativist ontology.

The philosophical underpinnings of CGT have been an on-going debate and Charmaz (2000) argues that this is due to a lack of explicitness in the 'Discovery' book (Glaser and Strauss, 1967), and it was useful to read the literature surrounding the different perspectives on this issue. It is clear that GT was formulated out of the originators' perception of the need to provide an alternative stance to positivism, which was heavily advocated at the time placing emphasis on the need for verification of theory rather than building theory directly from the data.

The epistemological assumptions of CGT vary in the literature where it can be viewed as interpretivist (Norton, 1999), pragmatist (Nathaniel, 2011; Locke, 2001) and objectivist (Charmaz, 2006; Lomborg & Kirkevold, 2003; Bryant, 2002), but Glaser's consistent response to these perspectives is that GT is a general methodology that can use any type of data and can incorporate any epistemological perspective (Glaser, 2003; 2005). Therefore, no perspective owns the methodology, more so that the methodology can be used by all philosophical perspectives as long as these views do not preconceive the study, and the focus is placed upon being open to the emergence

of theory. Christiansen (2007) supports this belief and explains that ontological and epistemological positioning can go against the hallmarks of CGT in possessing pre-framings or preconceptions. I understood this to mean that finding out what was really going on in veterans' lives was at risk of being pre-determined through imposing a particular lens or theoretical perspective on to the data.

A considerable amount of literature advocates that GT originated out of symbolic interactionism (Klunklin and Greenwood, 2006; Annells, 1996; Schwandt, 1994) but this is a perception that Glaser strongly disagrees with (Glaser, 2005). More recently scholars are also attempting to link GT and symbolic interactionism together as a theoretical guide to inform researchers (Milliken and Schreiber, 2012; Aldiabat and Le Navenec, 2011). However, guiding research using a priori theoretical perspectives such as symbolic interactionism and social constructivism are rejected in favour of the main concern and its resolution in the substantive area (Christiansen, 2008).

Breckenridge et al (2012) indicate that as CGT can use any epistemological perspective it is thus ontologically and epistemologically neutral. Nonetheless, philosophical assumptions are seen as important in research and this has led to academics criticising Glaser for not being explicit (Charmaz, 2006), but Glaser (2005) explains that the theoretical perspective adopted will be dependent upon the specific research study. More importantly, Glaser (2001:6) has re-iterated that CGT "is simply an alternative to positivistic, social constructionist and interpretative qualitative data methods". Moreover, Holton (2007) reinforces that research studies should not be constrained by any one philosophical foundation.

Despite these arguments, Breckenridge et al (2012) acknowledge that there is increased pressure for qualitative research to provide its philosophical underpinnings, as exploring them provides the researcher with the ability to discover how their assumptions of human nature may have an effect on the methodology they adopt (David and Sutton, 2004). However, Breckenridge et al (2012) add that it shouldn't be necessary in CGT as its purpose is to generate theory that fits, works and is relevant to the substantive area, and its simplicity may be compromised by spending too much time debating philosophical positioning. I did not want to approach the data using a defined theoretical framework and instead I wanted to remain close and open to what the data was actually telling me.

I approached the debate on the roots of CGT with the view that the 'Discovery' book was a response to methodological inquiries and was only the start of building the theory. It brought together two differently trained researchers, and in Glaser's own words he explains that he was "trained to combat the impressionistic influence and criticism of the Chicago School by tying the theory tightly to the data over and over again by constant comparison" (Glaser, 1998:332). Therefore, through the collaboration and merging of the two researchers' backgrounds, the start of GT began in 'Discovery', and the later works by Glaser (1978, 1992; 1998; 2001; 2003; 2005; 2009; 2011; 2012; 2013) have added to, and strengthened the methodology.

It is therefore clear that there is no consensus on the philosophical underpinnings of CGT whereby classic grounded theorists argue that it is irrelevant and can adopt all perspectives, and holds a paradigm of its own; whereas others have aligned it with

various assumptions. Specifically, the common labelling of CGT as positivist is not accepted by classic grounded theorists and it has been argued that placing classic CGT in an ontological position of 'subtle realism' appears to address the issue around the philosophical underpinnings of CGT (Hernandez and Andrews, 2012). The concept of subtle realism is promoted in the work of Hammersley (1992) that accepts the relativist position that all knowledge is based on assumptions that are a human construction, but also accepts a realist perspective of knowable phenomena; however, one that advocates reasonable confidence in knowledge claims rather than certainty. In support of the preference for reasonable confidence, Murphy et al (1998:69) add that determining confidence "will be based upon judgements about the credibility and plausibility of knowledge claims".

Relating this back to CGT would indicate that there is an objective element through identifying latent patterns of behaviour and seeking to formulate an explanatory theory, but one that aims to use multiple perspectives of reality and applies rigorous procedures (coding, constant comparison and theoretical sampling) to produce 'a theory' not 'the theory'.

Despite CGT being amenable to any philosophical stance, the researcher is likely to restrict what data they use in the substantive area based on their own personal perspectives of what is 'truth' and how we can know and study it (J. Holton, CGT fellow, personal email communication, 14th July 2013). Ontologically, I do not view CGT as definitively realist or relativist and support an ontological positioning of subtle realism for the purpose of this thesis. Epistemologically, I acknowledge that as a

researcher I will be naming the concepts in this research and accept an epistemological position similar to constructivist thinking where “we are part of the world we study and the data we collect” (Charmaz, 2006:10). Furthermore, Simmons (2011), a classic grounded theorist, accepts the constructivist position of knowledge as a human construct on a fundamental ontological and epistemological level, and acknowledges researcher presence in the research; but argues that it should not result in actively applying a constructivist theoretical perspective into the research. Again, pre-determined theoretical perspectives are not advocated in CGT and the focus is placed on conceptually naming concepts directly from the data which makes it different from other approaches. So, the focus of this research is on abstract conceptualisation of latent patterns in the data collected from veterans in the substantive area using the methodological processes of CGT.

Therefore, a subtle realist ontology and constructivist epistemology are considered compatible for this research (Andrews, 2016) where seeking the truth is not the aim; more so it is to provide a plausible theoretical explanation of a main concern and how it is being processed or resolved in the substantive area of combat-related limb-loss, using data that has been socially constructed. These assumptions have affected my choice of data collection methods and are presented later in this chapter.

The question of whether there is too much emphasis on the underpinnings of CGT and less attention on the product that it actually generates is likely to be continuously debated. Even from a constructivist stance, Charmaz (2006:178) agrees that grounded theory methods should not be “tied to a single epistemology”.

As a result, constructivism is considered to be one theoretical perspective and assigning CGT as occupying its own paradigm is another perspective on this issue (Holton, 2008). However, through increasing my knowledge of the different GT perspectives, reading CGT theories, identifying the methodological support available, and discussing my philosophical beliefs about inquiry; this enabled me to perceive that CGT was a suitable methodology to guide the research.

2.5.3 Engaging with the literature

Breckenridge et al (2012) highlight the methodological mire that a researcher faces in deciding which version of grounded theory to choose. Nevertheless, it is important to be aware of their inherent differences as this supports a researcher in adopting an approach that aligns with their philosophical beliefs about inquiry, and ultimately one that they can justify (Evans, 2013; Cooney, 2010; Annells, 1996). A clear difference deduced from the seminal texts relates to their attitudes towards the use of extant literature which has been the subject of serious debate (Gibson and Hartman, 2014). Therefore, Backman and Kyngas (1999) advise novice researchers to consider how familiar they become with the extant literature before their study commences.

When I decided to explore combat-related limb-loss I understood that the doctoral research process generally required a literature review in the chosen research area to have an awareness of the knowledge in the field, identify a gap in the literature and formulate a research question. Furthermore, Elliott and Higgins (2012) explain that doctoral students often find CGT after completing the required research proposal meaning that they have already undertaken a literature review. However, I was

uniquely situated by finding the methodology first and took the time to consider the main approaches to the use of the literature in a GT study (Table one).

Table 1: Approaches to the use of literature

Classic Grounded Theory	Straussian Grounded Theory	Charmazian (Constructivist) Grounded Theory
A pre-study literature review in the substantive area and closely related areas should be avoided	An early review of the literature is advocated, but there is no need to review <i>all</i> of the literature in the field	Acknowledges delaying the literature review to allow the researcher to articulate their ideas. However, tends to focus on the expectation of a literature review in the research process
Extant literature is incorporated through comparative analysis when the <i>core category</i> emerges and the theory is well developed Extant literature in the early stages can introduce preconception and detracts the researcher's attention from what is actually going on in the data	Engaging with the literature is on-going and can be used as a secondary source of data <i>or</i> for comparisons with the data Extant literature can hinder creativity if it stands between the researcher and the data	Extant literature can help the researcher clarify ideas and make comparisons. Sensitising concepts can be used as points of departure. Extant literature should be used without letting it stifle creativity or strangle the theory
If a literature review is done then it should be incorporated into the analysis as data	The literature can direct theoretical sampling, help with concept development	The literature helps to demonstrate grasp of relevant works, identify significant findings and

	and defining properties and dimensions	connections between the research and earlier studies
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Strauss and Corbin (1998:49) advocate an early literature review but explain that “there is no need to review all of the literature in the field beforehand”, and focus on the advantages of using extant literature in a grounded theory study. However, Glaser (1992:31) disagrees and advises that “there is no need to review any literature in the substantive area under study” before the research commences. Instead, the researcher should begin by collecting and analysing the empirical data, and refrain from consulting the extant literature until the later stages of the grounded theory process. Charmaz (2006:165) reinforces that the place of a literature review in grounded theory is conflicted and debateable, but acknowledges withholding the literature review where possible until the writing up stage as a way to avoid seeing the “data through the lens of earlier ideas”. This is a completely different sequence to that of a hypothetico-deductive model where a researcher starts with a hypothesis and writes a literature review (Backman and Kyngas, 1999; Creswell and Miller, 1997).

Any engagement with the literature in the substantive area is halted until the researcher is close to completing the theory and then it is acceptable to weave in extant literature for constant comparison at the writing up stage through an integration of ideas (Glaser, 1978; 1998). The literature review will be selective and based on conceptual comparison not contextual comparison (Christiansen, 2011)

ensuring that it is relevant to the core and sub-core categories for theoretical integration.

In CGT, the researcher is open to discovery so that concepts, problems and interpretations can emerge without unnecessary influence from extant literature. He explains in more depth that if this advice is ignored it is likely that the researcher will:

- 1) Be affected by concepts that are irrelevant and do not fit the theory
- 2) Be influenced by preconception which forms a “professional” problem of no relevance to the substantive area and detracts attention from what is actually going on in the data
- 3) Introduce irrelevant speculation, non-scientifically related interpretations and connections into the theory that do not work
- 4) Become affected by known authors in the field or as Glaser states become “awed out” which may affect the researcher’s confidence to create theory
- 5) Waste valuable time searching for literature that may be of no relevance to main concern of the participants in the substantive area.

Glaser (1998:69) reiterates that grounded theory “must be free from the claims of related literature” and by avoiding the above, this will help the researcher avoid preconception, and thus have the ability to discover emergent concepts, hypotheses, properties and theoretical codes that fit and work. Moreover, Holton (2008) adds that subject expertise may prevent the researcher being open to potentially new theoretical discoveries that do not exist in the extant literature.

Aside from avoiding the extant literature in the substantive area, Glaser (1998:74) also explains that as the research process continues a “new literature” starts to appear that begins to explain the main concern of the participants. It is advised to refrain from delving into the literature in these new areas as well until the theory is fully completed. By doing this, the continuous emergence will be not hampered by being overzealous with the need to compare findings with extant literature.

Aside from their differences, two commonalities do exist: first, it is undeniable that the extant literature will be incorporated at some point in the grounded process and second, there is a universal understanding that theoretical development should be guided by the emerging concepts from the empirical data, as oppose to concepts taken from the literature (Heath and Cowley, 2004). Urquhart (2013:7) summarises this effectively by emphasising that “we should seek to see what the data indicates, rather than shoehorn it into a theory that already exists”, therefore, adopting a position of “theoretical agnosticism” (Henwood and Pidgeon, 2003:138) may well be the best advice to researchers who are using grounded theory methodology. This stance is recognised in the wider academic community (DiStefano and Cayetano, 2011; Furniss et al, 2011) which encourages researchers to take a critical approach to the literature and only incorporate theories and ideas that have earned their way into the analysis (Simmons, 2011).

Therefore, in keeping with CGT methodology a prior literature review is not present within this thesis, but an initial *literature search* found that combat-related limb-loss is an unexplored qualitative research area. This situation may be viewed as ideal for a

CGT study where the researcher's full concentration can be placed on discovering a main concern and the core category in the substantive area (Glaser, 1998). After this has been achieved, the theory will be integrated into the extant literature on a conceptual basis.

Aside from the above advice, an important element of CGT is to *develop theoretical sensitivity* which enables the researcher to detect theoretical insights and generate concepts through conceptualising the data (Holton, 2007). This is a skill that improves over time in the analytical process (Giske and Artinian, 2007) and is helped through continuous reading in other substantive areas (appendix five). The background of the researcher also contributes to the level of theoretical sensitivity (Glaser, 1978:39). Therefore, making myself aware of personal presumptions which are discussed in the next section, assists in determining whether the concepts generated are truly emerging from the data or from my presumptions.

2.5.4 Choosing a grounded theory approach

2.5.5 Considering my preconceptions

To remain as open as possible to discovery and to the emergence of concepts, problems and interpretations from the data (Glaser, 1998) I took the time to interview myself as this is advocated in the methodology (Breckenridge et al, 2012, Glaser, 1998). I understood that my preconceived ideas or a priori assumptions could potentially force irrelevant concepts into the data or direct data collection in an unnecessary direction irrelevant to the substantive area (Glaser, 1978); so, I asked myself:

1. Do I have any preconceptions?
2. If I do, what are these preconceptions?
3. If so, what do I do about them?

I have had considerable experience of caring for those with limb amputations both in my nurse training where I carried out my management (final) placement before qualifying on a surgical vascular ward, and post qualifying in the district nursing service. The patients I nursed in both settings underwent amputation due to worsening peripheral vascular disease, diabetes or some other pre-existing condition that they had lived with for some time. I never nursed anyone who had experienced traumatic amputation e.g. road traffic accidents, crush injuries etc. Also, there is a clear age gap in the patients I have nursed and the amputees that I am likely to be researching. So, when evaluating my experiences there are clear contextual differences in my professional background and the substantive area of combat-related limb-loss. Through having no experience at all of caring for those with traumatic amputation coupled with having no awareness of serving in the armed forces in a combat zone, I feel my preconceptions are minimal. Nevertheless, I must acknowledge the reactions I have experienced from patients to make myself conscious of not forcing my assumptions into the data. Some patients had themselves been consistently aware of their worsening health condition and in some ways were 'prepared' for the inevitable, but not all. I feel this is not relevant to the substantive research area due to the acute nature of combat-related injuries however; because of the very nature of their role as soldiers they may have some level of awareness that they may be injured

in combat. This is a definite preconception but it is something that has been going through my mind for some time which I need to be mindful of.

Some patients found it hard to accept their limb-loss and this manifested itself in many ways. For instance, some experienced mood disturbances whilst others were diagnosed with clinical depression. Some refused to go out in public and others attempted suicide. Conversely, some patients accepted their amputations and were in fact relieved to have an amputation as they had experienced a poor quality of life with their limb intact e.g. those with chronic leg ulceration failing to heal; others living with severe pain due to worsening peripheral vascular disease and some with complications from diabetes. These are my experiences and I place emphasis on the experience of limb loss to be very individual to the person and I know these preconceived ideas must be prevented from entering the data unless they emerge from the data. Therefore, it seems the risk for preconception relates to the post-amputation effects on the individual rather than the context. I also have to be clear that a large part of my childhood was spent with my father being in the armed forces which may bring preconceived ideas around behaviours, but due to my young age and him not experiencing any combat related injuries, I do not feel this poses much risk to the data.

The risk for preconception on my part is therefore recognised, albeit low, it has indicated a need for me to look at this more closely to determine the level of impact my clinical experiences as a registered nurse may have on the research. This is a separate issue from my philosophical worldview which was discussed previously in this chapter, and specifically addresses the level to which I may impact on the inductive

nature of CGT where emergence of data takes precedence. I am aware that my level of knowledge as a researcher in the substantive area will increase as the study progresses but it is important to delineate my position from the outset. Lykkeslet and Gjengedal (2007:700) acknowledge preconceptions in what they term 'practice-close' research and a useful statement they put forward is that:

A researcher never enters the field, be it a foreign or familiar one, fresh and without preconceptions. All [s]he observes will be influenced by her previous experiences and her pre-understanding. It takes time and effort to develop a way of distinguishing between the field as viewed by a fieldworker and the same field viewed by the practitioner.

I support this statement and accept that having preconceptions is unavoidable as I cannot remove my clinical experiences from my consciousness; however I am confident that adopting the 'procedures' in CGT will assist in preventing unnecessary preconceived ideas from entering the data that have not earned their way (Simmons, 1994). Specifically, Christiansen (2008) identifies that in CGT, the researcher's assumptions must be sustained by recurrent incidents in the data and continued inquiry is based on these assumptions that are generated from the data.

I felt that I needed to ascertain my starting position as a researcher in the area of combat-related limb-loss and Reed and Procter's (1995) researcher position continuum (p.10) assisted me in doing this (table 2). When looking at the continuum I have adapted this to relate to my current situation, and have placed myself as an

outsider. Although I have some professional experience of limb-loss, I have not experienced the traumatic nature of limb-loss sustained in combat.

I find that Holton (2007) supports my position in that she advises that CGT aims to conceptualise the main concern in the substantive area and how they continually resolve this concern through identifying the latent patterns in their behaviour.

Therefore, if my professional and personal preconceptions are not supported by an emerging latent pattern of behaviour founded through constant comparison and derived directly from the data, then they are not welcome in the theory development.

I have highlighted that I do hold some preconceptions that I need to be aware in data analysis and it has been sensible to identify these early on in this research, in order to remain open to discovery. With regards to preconceptions I also support the position of methodological self-consciousness (Charmaz, 2017) where I will attempt to be as reflexive as possible during the study through memo-writing.

Table 2: Researcher position continuum

Outsider	Hybrid	Insider
<i>A researcher undertaking research into practice with no professional experience</i>	<i>A practitioner undertaking research into the practice of other practitioners</i>	<i>A practitioner undertaking research into their own and their colleagues practice</i>

2.6 Research procedure

2.6.1 Recruitment of participants

Several strategies were used to invite veterans to the study over a two-year period commencing in 2013. I began by sending messages to veterans through their personal websites giving them an overview of the research (as the messaging systems would not allow attachments, so I could not send the participant information sheet) and providing my contact details if they wished to find out more information. I then made use of Twitter by 'following' veterans I had become aware of through wounded veteran charities such as BLESMA and Help for Heroes. I sent them a brief 'tweet' (a message/post) letting them know I was carrying out research to raise awareness of combat-related limb-loss. I also made my own research website (through SurveyMonkey) and a video clip of myself explaining more about the study, and asked wounded charities if they would consider hosting the research website link somewhere visible on their websites. These three approaches, although fragmented, proved to be a success in recruiting nine veterans. An additional three veterans were recruited via Facebook (n=2) and one via word of mouth from a veteran included in the sample. Aldiabat and Le Navenec (2018) stress that aside from sample size, the number of interviews held with each participant and the length of time of each of them is very important. In my research, the interviews ranged from 1.5 hours to 3.5 hours and all of the veterans agreed to follow-up email interviews, so I could ask for more information.

2.6.2 Sampling strategy

Glaser (2002) argues that researchers should not assume the relevance of demographics such as age, gender and reason for amputation unless their importance emerges from the data. Despite this advice, I was still unsure whether I should take into account demographics in my sample strategy and attempted to find studies that could help illuminate the issue. When using a CGT approach, Roderick (2009) spent considerable time putting together a demographic questionnaire and sought to balance her sample that included more males than females when studying the concern of senior undergraduate students. She found that out in her study that much of the information she collected from the questionnaire had little relevance to the concern of senior undergraduates. I found Roderick's research interesting and insightful, but I couldn't find any more studies from a CGT perspective, so I looked to the wider GT literature to gather more information. I found that the vast majority of studies had incorporated demographic information and these studies were generally modified versions of GT, but I could not determine the relevancy of the demographics in the articles. Also, although historical Strauss (1987), co-originator of GT methodology advises researchers to focus on evolving theory rather than by predetermined population dimensions. Taking this all into account and seeing as I was exploring the impact of combat-related limb-loss from the multiple perspectives of veterans I decided that demographics were not necessary, and population representativeness was not a goal of my research (Uytman, 2014).

I considered what would be the ideal sample size for my study using the CGT approach. I also looked at the wider literature and Thomson (2011:46) posits that the most

important factor is that the grounded theory generates ‘enough’ data so that “patterns, concepts, categories, properties and dimensions of the given phenomena can emerge”. The most widely accepted idea for determining sample size in qualitative research in general, is not by applying numbers, but through data saturation (Vasileiou et al, 2018) or informational redundancy (Sandelowski, 2008), where nothing new is apparent (Saunders et al, 2018). However, in line with CGT the term *theoretical saturation* was used in this research and is discussed in chapter three.

Sampling in a CGT study is sequential, beginning with purposive sampling and moving into theoretical sampling when concepts begin to emerge. Charmaz (2015) explains that theoretical sampling is a critical step in theory-building and it is one of the most misunderstood strategies. I was mindful not to start theoretical sampling too early as I did not want to force ideas and concerns on veterans. However, there comes a time during concurrent data collection, coding and analysing, that decisions need to be made about what data to collect next and where to find them (Glaser 1978). I ‘took the leap’ after the fifth interview as I was generating several tentative concepts that raised questions in the data. As I progressed with theoretical sampling an emerging storyline developed (Urquhart, 2019) and this is outlined in chapter four. Most importantly, as Suddaby (2006) suggests, GT is not seeking the truth about reality, but, instead, to make new discoveries about patterned relationships in substantive areas.

In order to collect additional data whilst waiting to recruit more veterans, I had a conversation with my supervisors about other avenues for data collection. I decided to incorporate social media, autobiographies, newspaper articles, documentaries

symposia, charity websites and a theatrical play to extend and corroborate developing concepts. (table 3).

2.7 Ethical considerations

2.7.1 Ethical approval for the study

This research was guided by the ethical principles and values, and the study proposal was reviewed by the MMU Ethical Research Committee (approval number 1167) and approved in February 2013. Amendments were made and approved in April 2013, June 2013 and July 2013 (appendix three).

2.7.2 Protection from harm

When collecting data online and offline, protecting the participants from harm was particularly important due to limb-loss being a sensitive subject, and this was identified from the outset. The Association of internet researchers (AoIR, 2012:4) highlight that ethical decisions should be based on “practical judgment attentive to the specific context”. As a researcher, I asked myself whether this research ‘needed’ to be carried out, and was I going to cause further harm by investigating their lives. Gibson et al (2012) identify that interviews on a sensitive topic can be experienced as intrusive and distressing, however, Jack (2010) makes the point that they can also be cathartic for participants. Furthermore, a review by Newman and Kaloupek (2004) of twelve studies of participants’ appraisals of their experiences in trauma-related research discovered that most participants felt the benefits from taking part.

Being cognisant and reflexive throughout the ethical process, and following university guidelines on good practice and GDPR, enabled the formation of a participant information sheet that justified the research and sought to minimise harm (appendix one). In order to manage any harm that could have arisen during the interviews, a distress protocol for qualitative data collection was used to guide decision-making (Haigh and Witham, 2013) (appendix six). The distress protocol did not need to be initiated for veterans during the study, however it was used by me as the researcher in two ways. First, in order to be cognisant of the risk of emotional exhaustion (for veterans and myself), interviews were spaced apart for both face-to-face and online/email interviews (Connolly and Reilly, 2007). Secondly, I had a debrief session by telephone with my first Director of Studies after each interview where I reported back on how the interview had gone. I tended to focus the conversations on veterans' stories, but not how I felt about them i.e. I was not open about how the interviews were impacting on me. In retrospect, it would have been helpful to capitalise on support from other members of the team as well, to gain a more holistic view the stresses that occurred during the research process.

In hindsight, it would have also been beneficial to have kept a research diary to document my thoughts, reflect on interviews with the veterans and have an inner dialogue (Engin, 2011). More recently, Snowden (2015) adds that diaries provide a space for individuals to reflect on their health status, make sense of their experiences and vent emotions. As a result, I may have been able to better self-monitor the impact of veterans' stories if I had kept an intimate diary, and avoided what Possick (2009:869) terms "emotional enmeshment", where a researcher experiences difficulty

disengaging from the experience of participants. I was affected by the stories that veterans told me, and I often became tearful post-interview and during data analysis. I can relate to the concept of emotional enmeshment as that is exactly how I felt. Therefore, in my future research endeavours I will seek to keep a diary as a way to manage my distress and also share it with my colleagues during debrief sessions.

2.7.3 Informed consent

Gaining informed consent seeks to ensure that people are not deceived or coerced into taking part in a study (Royal College of Nursing Research Society, 2011, Royal College of Nursing, 2009). Before any interviews were carried out, participants were required to sign a consent form (appendix two). They were given two weeks to think about taking part and were told that they could withdraw from the study at any time, without it affecting their care in any way.

Gaining consent online involved the same steps as collecting offline data, but the consent forms were exchanged via email. At all times, participants were encouraged to ask questions after reading the participant information sheet. Most participants asked questions, and one in particular voiced some very sensitive information that they did not want to be used in the study, so it was made clear to them that their wishes would be respected.

Kaplan and Haenlein (2010:61) define social media as "a group of Internet-based applications...that allow the creation and exchange of user-generated content." In this study, the social media applications used were YouTube, Facebook and blogs. Despite

users using these platforms to publish their material with the intention of it being made freely accessible to the public, it was deemed necessary to ask for consent out of respect for the users. A simple request on an 'opt out' basis was formulated and sent to the veterans. The majority of veterans did respond and were agreeable to their content being used in the research.

2.7.4 Confidentiality and anonymity

Grbich (1999) explains that it should be made explicitly clear to participants how confidentiality and anonymity will be maintained, 'before' the study actually begins (Rae and Sullivan, 2003). To ensure confidentiality of the data, participants were informed that recordings of interviews and hand-written notes would be kept in a locked room at my home. Data and participants' personal information such as an email address, were kept on the researcher's computer that was password protected. It was explained to participants that their data would be used in writing for publication, and all participants agreed that their stories should be shared to raise awareness of their lives.

Anonymising participants' names with a pseudonym is considered to be the default process to protect their identity and prevent harm from a researcher's perspective (Saunders, Kitzinger and Kitzinger, 2015). Contrarily, Giordano et al (2007) argue that taking the assumed position that participants wish to remain anonymous may in fact be untrue, and as a result we may be refusing participants their autonomy, and depriving them of a voice.

Grinyer (2009) provides an account of anonymity in the study of a sensitive subject in which anonymity was questioned, and It was discovered that the majority of participants wanted their real names ascribed to their stories as oppose to a pseudonym. Therefore, in this study anonymity was offered to every participant, however, they also had the choice of being credited with their stories by using their own names (or a name of their choice) if they wished.

2.8 Data collection methods

2.8.1 Sources of data

To formulate a GT the researcher needs sufficient data to identify patterns of behaviour and achieve theoretical saturation (Glaser, 1978; Glaser and Strauss, 1967). The most common data collection methods in CGT are face-to-face interviews and observations, but there are no limits set on the data sources (Andrews et al, 2012). Limb-loss is a sensitive subject and there were several veterans that emailed me thanking me for doing the research, but they just did not feel ready to talk. Anderson (2010) urges researchers to think about using other methods aside from interviewing alone e.g. documentary analysis. I sought to maximise the use of offline and online sources of data in order to generate the theory (table three). I reminded myself that no matter what type of data I used, the data is the data and it was my job to let the data emerge (Glaser, 1998).

Table 3: Sources of data

Sources	Number
Face-to-face interviews	5
Online/Email Interviews	7
Autobiographies	5
Theatrical Plays	1
YouTube Videos	20
Documentaries	3
Online Blogs	3
Newspaper/online articles	45
Symposia	2
Charity websites	2

2.8.2 Using an autobiography in classic grounded theory

In the early stages of the research process I spent time questioning whether the data collection methods I was going to use were appropriate for CGT, and attending a conference in 2013 reinforced my concern, and I wrote a memo about it:

Method memo: Can I use an autobiography in CGT? (March 2013)

Recently attended a conference and was fortunate enough to have conversation with a gentleman who had used grounded theory in his PhD and we got into a deep conversation about my research and my data collection methods. When I mentioned that I would be using autobiographies as data I was surprised when he said “well that’s not grounded theory”. I was baffled by this remark and started to question whether his point was correct. That evening I re-entered the CGT literature desperate for some reassurance and guidance that what I was doing was acceptable. In actual fact, the studies I had read thus far that adopted CGT methodology had not used autobiographies as a form of data collection which made me panic. However, in my own mind I could not see how an autobiography detailing a person’s experience of combat-related limb-loss could not be classed as data; in fact my opinion was the exact opposite. I felt it could contribute a lot to the research. Moreover, if the study should be led by the participants in order to identify what their concerns are not what the researcher assumes them to be; then I would argue that an autobiography is probably one of the richest sources of data for the researcher to utilise.

In revisiting the ‘Discovery’ book, Glaser and Strauss (1967:65-66) explain that “[d]ifferent kinds of data give the analyst different views or vantage points from which to understand a category and to develop its properties” and that “there are no limits to the techniques of data collection, the way they are used, or the types of data acquired”. These viewpoints are supported in the wider literature (Ralph, Birks and Chapman, 2014; Andrews et al, 2012; Gelling, 2011).

Also, Strauss & Corbin (1998:52) talk about how to use non-technical literature which includes but is not restricted to biographies, letters and diaries. They advocate their use as a form of methodological triangulation that can “supplement interviews and observations” and be used as “primary data”. Therefore, there is no need to view specific data as “sanctified, objective or valid” (Glaser, 2007:8) as all incidents found from my data collection methods were subjected to constant comparison in exactly the same way to identify patterns in the data, formulate concepts and achieve theoretical saturation. Moreover, the basic CGT dictum ‘all is data’ (Glaser, 2001:145) means that all sources of data can be used in the research area to develop a GT. Although this maxim has been criticised by some for being too vague (Gibson and Hartman, 2014), other researchers support the notion that many sources of data can be used for data analysis (Birks and Mills, 2011; Bryant, 2003). As I was using the CGT approach it was reassuring that diverse data sources had been recognised as worthy in the literature, and supports my belief that there are different ways to explore the research area (Gibson and Hartman, 2014). Furthermore, the reflective process used I engaged in was very helpful, and I viewed this positively as it literally forced me to justify my decision making.

2.8.3 Interviews

As this research sought to explore veterans’ lives to understand what their concerns were and how they were resolving them it was necessary to use open ended interviews. This approach to interviewing in CGT is vital and Glaser (1998:123-124) talks about the need for the researcher to be a “big ear” when talking to participants as this “instils a spill” meaning that they are likely to tell the researcher what is really

going in their lives as they can see they are being listened to. This was my priority when I was talking to all the participants during interviews where I sought to create an environment in which they would feel comfortable talking to me. Moreover, Glaser and Holton (2004) explain that the researcher:

“listens to participants venting issues rather than encouraging them to talk about a subject of little interest. The mandate is to remain open to what is actually happening and not to start filtering data through pre-conceived hypotheses and biases to listen and observe and thereby *discover* the main concern of the participants in the field and how they resolve this concern”.

In order to facilitate this, I used grand tour (open ended) questions such as “how are you?” and “can you tell me what’s going on in your life at the moment?” (Simmons, 2010, 2013; Glaser, 1998) to start conversations and I felt completely comfortable with this as my professional career has been spent talking to other people as a nurse and educator. I always sought to ensure that I used the words of participants to direct the next area for discussion, for example, a veteran spoke about the importance of raising money for charity, so I asked “OK, raising money for charity seems to be important to you; are you able to tell me a bit more about this?” Glaser (2013) supports this method of interviewing and provides advice from Alvita Nathaniel, a CGT fellow who stresses that words used in interview questions which are the preconceptions of researchers need to be avoided as they can result in the participant diverting away from their main concern. Therefore, firstly allowing participants to talk freely using the grand tour questions gave them the opportunity to tell me about areas that were important to

them, and using their words to explore areas in more depth helped to ensure that the discussions were relevant to their lives. Moreover, interviews are recognised as the most common method for data collection in GT, and unstructured interviews are best suited to research investigating very poorly understood topics (Foley and Timonen, 2015), as was the case in combat-related limb-loss.

Method Memo: Grounded Theory Seminar, Cork (March 2013)

A piece of advice I have taken from attending a grounded theory seminar in 2013 is to treat interviews with participants as being more of a conversation than an interview (Tom Andrews, Grounded Theory Seminar, 2012). For some researchers in the seminar this made them feel uncomfortable and they seemed to need a more structured approach to their interviews which did not make sense to me from what I had read about grounded theory being participant-centric and requiring openness. Some delegates wanted their participants to talk about a certain gap in knowledge they had derived from a literature review and/or had constructed specific research questions to ask.

2.8.4 Using online videos

When I initially looked into the CGT literature, I struggled to find studies that used video material as data or as a data collection method but again I kept in mind the maxim “all is data” (Glaser, 2001:145). I continued to search the literature and came across the book ‘Grounded Theory- The method, philosophy, and work of Barney Glaser’ (Martin and Gynnild, 2011) which helped support my justification for the use of

online video material as data and also a data collection method. In particular, the chapter by Nilsson (2011) documented her experiences of capturing video material and analysing it using a CGT methodology in those participants who non-verbally communicate. She acknowledged that using recorded material was not recommended in CGT but it was the only way of capturing incidents for analysis in her area of study. When reflecting on this, the obvious difference in our studies is that I was not actively recording video material myself, instead I am collating and analysing material already recorded. However, the key point Nilsson (2011:107) makes is that the “primary concern [in using video methods] is the ability to make constant comparisons of video data...such that the research can uncover latent social patterns in the substantive field of interest”. Therefore, the process of using the search strategy detailed above coupled with taking field notes of the videos as opposed to transcribing in the open coding process was deemed sensible for a CGT approach. The videos would be analysed in exactly the same way as offline data by documenting incidents and identifying concepts through constant comparison. Furthermore, I agree with Nilsson (2011) whereby the decisions for using video as data in CGT should be based on how it is used in analysis and not in itself as a form data collection. Moreover, in the context of my research, video material was only one of the data collection methods being used in the study.

As I now felt more comfortable with using video data, I set about developing a strategy that would:

- Locate video material that was relevant to the study
- Avoid me getting lost within the plethora of online video material
- Ensure my time was used effectively and efficiently

In order to achieve the above aims I firstly needed to know where relevant video material could be found, and after searching the internet I decided on these suitable locations:

- YouTube (<http://www.youtube.com/>)
- Google videos (<http://www.google.co.uk/videohp>)
- Bing videos (<http://www.bing.com/videos/browse>)

For temporal reasons I knew that I couldn't use all three of these websites simultaneously as it often led to duplication of the videos, therefore I had to decide what search engine would provide the most valuable data for the study. Also, as I was using multiple data collection methods, I needed to embrace the video material but be conscious of data overwhelm and attempt to make this task manageable. The three search engines were perused in more detail by looking at how user friendly their search filtering capabilities were and inputting keywords into the search box to determine the relevancy of the results. This process led me to choose YouTube as my data collection source (figure two).

Through incorporating numerous data sources, I concluded that I would be able to:

- Read about veterans' experiences using their autobiographies, narratives, stories, newspaper articles and blog posts
- Listen to and observe their experiences through YouTube videos, documentaries, theatrical plays and relevant symposia
- Discuss their experiences of amputation and life after injury through interviews (face-to-face and online) and discussions

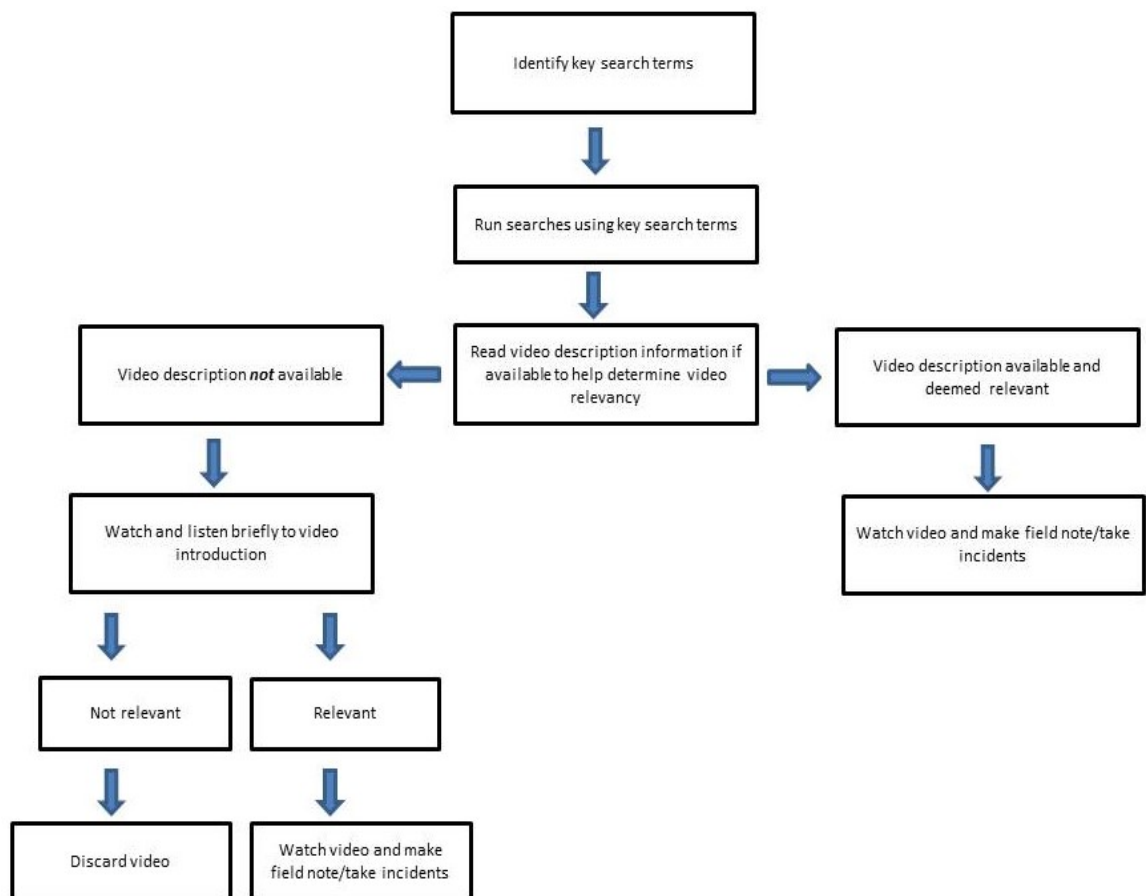


Figure 2: Data collection process

2.8.5 Use of computer-assisted software

I had not used computer assisted qualitative data analysis software (CAQDAS) such as NVivo® or Atlas.ti® before but I did investigate these tools by attending introductory webinars to achieve a balanced opinion on their use to decide whether the software would be a help or a hindrance. The webinars provided more insight into their functions and I took the time to discuss how they were being used by my PhD colleagues. I found out that some colleagues were simply using them to store data whereas others were actively using the automatic coding features of the packages to analyse data. As explained previously, I found CGT methodology early in the research process and invested time reading about the usefulness of CAQDAS in both the CGT literature and in PhD theses that had used the methodology. This engagement was extremely beneficial and enabled me to read other's advice and take this into consideration. From a methodological point of view, I understood that CGT focused on emergence of theory through implementing the inbuilt process of constant comparison, so using the automatic features of CAQDAS was not advised. Specifically, Glaser (1998) acknowledges the difficulty of trusting to emergence, but argued that despite technology offering a safety net for researchers and producing an acceptable research product, it is unlikely to formulate a relevant GT. Furthermore, Glaser advises that conceptualisation and identifying patterns occurs in the researcher's own mind and not in the computer. Similarly, Urquhart (2013) urges researchers to attempt the coding process without a package as in her experience it can hinder concept generation, but she acknowledges its advantage in data management. I agreed about the benefits of using CAQDAS for storing and retrieving my data but I was cognizant of the time it would take to familiarise myself with the packages. Therefore, I made the

decision that time would be better spent learning the processes of CGT and utilising storage methods I was already using on a daily basis.

Although CAQDAS was not used, this research used Microsoft Word and Excel to facilitate the research process. Microsoft Word was used to type the field notes for each individual interview and the video data. However, for other sources of data such as autobiographies and blog posts, all incidents were either taken directly from these sources verbatim and typed into Microsoft Word documents, or printed directly from the online source.

All completed field notes and documents were printed and through the open coding process, all the incidents in the data were highlighted and cut into individual strips which enabled me to treat them as separate incidents. All incidents were then subjected to the constant comparison process in accordance with the methodology by hand sorting the data. This led to the development of concepts (named patterns in the data) and initiated on-going memoing whereby each concept received their own memos and were typed in separate Microsoft Word documents. The act of hand sorting was continuous throughout all stages of the research process from the initial formulation of concepts through to their saturation, and theoretical sorting of memos (Glaser, 1998; Holton, 2007). Memos are discussed in more detail in chapter three.

2.9 Summary

This chapter has provided an in-depth discussion of the grounded theory approaches available to study the substantive area of combat-related limb-loss, providing both

their benefits and their drawbacks. A rationale is given for the adoption of classic grounded theory procedures in this study, in order to meet the research aim and objectives, and to form a substantive grounded theory. The philosophical worldview of grounded theory has been discussed and my own worldview has been given. Next, my engagement with the debate surrounding the use of extant literature in a grounded theory study and the rationale that led to an initial delay in writing a literature review are provided. Consideration has also been given to researcher preconceptions. Finally, the research procedure, ethical considerations and data collection methods are provided. Chapter four goes on to clarify the data analysis process.

CHAPTER THREE:

Data Analysis: Practical Application

3.1 Introduction

Chapter three presents the data analysis procedures of classic grounded theory as put forward by Glaser and Strauss (1967) and Glaser (1978, 1992, 1998). Each step of the methodology will be explained and will detail how these processes were used to develop the emergent theory.

3.2 Core characteristics of Glaser's methodology:

The methodology of CGT has been written about frequently since its inception (Glaser 1978; 1998; 2001; 2003) and has been used across a range of disciplines including journalism (Gynnild, 2007), nursing (Giske and Artinian, 2007), education (Scott, 2007) and management (Holton, 2007). A wide variety of social issues have been investigated using the methodology such as the theory of 'mutual intacting' which details the clinical judgement practices nurse practitioners use when engaging with their patients (Elliott, 2010), and the theory of 'commodifying self' which explains how university undergraduates respond to the challenges they face in their final year at university (Roderick, 2010). Each piece of research has contributed new perspectives and knowledge to their disciplines, which demonstrates the capability of CGT methodology to produce insightful research.

Stern (1980:116) postulates that the strongest case for grounded theory is conducting research entering “unchartered waters” therefore as the substantive area of combat-related limb-loss is presently under-researched, CGT methodology will seek to provide knowledge in the substantive area where it does not currently exist, through discovering “theory from data” (Glaser and Strauss, 1967:1).

Entering the substantive area with as few preconceived ideas as possible is pivotal to the emergent discovery of grounded theory. Specifically, the research needs to avoid preconceiving the general [research] problem (of the substantive area); the participant’s problem; what received concepts will explain the current behaviour; what theoretical code will integrate the theory; what theoretical perspective applies; and questionnaire questions (Glaser, 2013:4). The emphasis is that the researcher cannot know beforehand and knowing is discovered later in the research process through emergence.

This does not mean that I enter the area of combat-related limb-loss having erased everything I know about limb-loss as this would not be possible, neither is it the expectation of CGT. The requirement is to suspend my knowledge and experience in favour of emergence of theory from the data (Urquhart, 2013; Glaser, 1998). The researcher goes into the area without knowing the problem and with an “abstract wonderment of what is going on that is an issue and how it is handled” (Glaser, 1992:22). In this research I was entering the substantive area of combat-related limb-loss with a general interest in what the concerns were for these veterans and how they were resolving them.

The intent of CGT is to conceptualise the relevant patterns in life among the population being studied on the emergent problem (B. Glaser, personal email communication, July 2013), and Simmons (2011:26) adds that it is an “inescapable truth that human behaviour is patterned and that these patterns are often underlying, or latent, and persistent”. Therefore, to be able to identify the emergent problems and patterns in veterans’ behaviours I focused on putting aside my personal and professional knowledge, experience and beliefs about limb-loss (Holton, 2007).

CGT is a set of integrated conceptual hypotheses that are generated systematically to formulate an inductive theory about a substantive area (Glaser and Holton, 2004). More recently, Glaser (2013) has added that the methodology just contributes some abstract concepts to the field about what is going on with easy to remember concepts, that people in the substantive area can relate to.

In order to build the grounded theory, the processes involved as put forward by Glaser (1978; 1998) include data collection, open coding, selective coding, memoing, categorising the incoming data using the constant comparative method (CCM), theoretical sampling, and theoretical coding, in order for the core category to emerge (Stern, 2001; Glaser 1998). These key processes are shown individually in following tables in order to demonstrate how they were used to formulate the grounded theory in my study. Figure three re-iterates the processes, but it is important to note that although they may appear to be static and sequential, they are in actual fact, cyclical in nature. This means that I coded the data and constantly compared with new incoming data, categorised the data, wrote memos about concepts and used

theoretical sampling to direct future data collection. I repeated these steps over again until the core category, the related categories, and the properties were theoretically saturated (Glaser, 2011; Holton, 2007). To help me with these processes I was fortunate to have Professor Cathy Urquhart (2013), a Grounded Theorist on my supervisory team and I used her book throughout the research. I also read articles by CGT fellows (Pergert, 2009; Roderick, 2009; Scott, 2009) and attended four CGT troubleshooting seminars under the guidance of Dr Helen Scott and Dr Tom Andrews (CGT fellows).

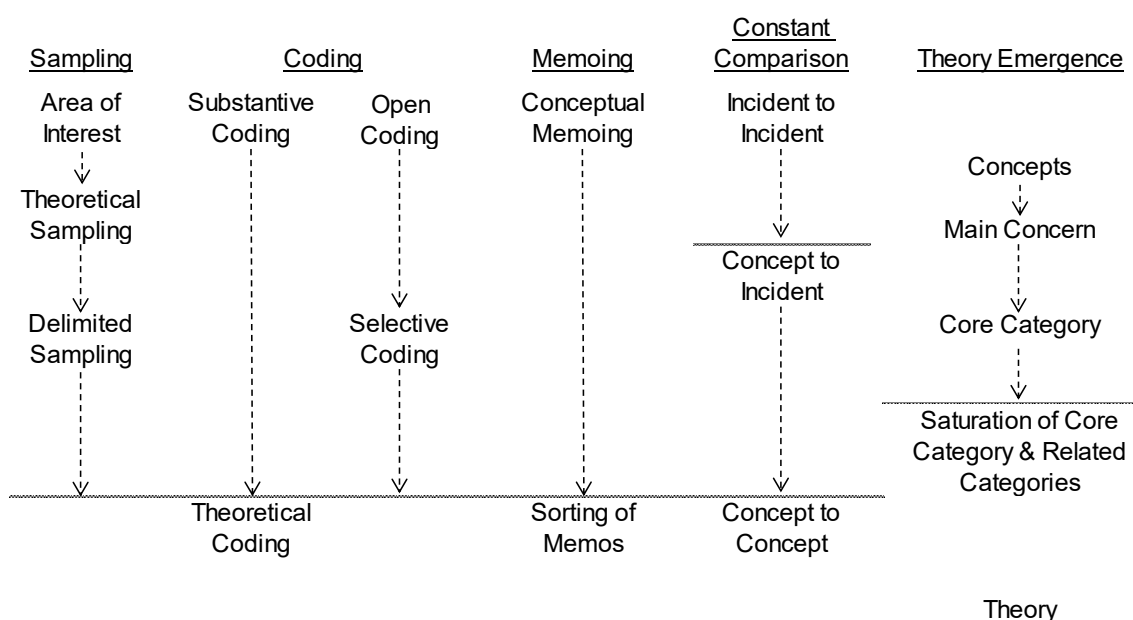


Figure 3: Classic Grounded Theory procedures

3.3 Open and selective coding

Substantive coding incorporates two distinct linear processes (open and selective coding) where the researcher firstly analyses the data by fracturing it into open codes.

This meant that I was labelling and organising the data codes, in order to try and ascertain what was going on in the substantive area. Holloway (2008) explains that a concept (code) is a descriptive or explanatory idea with its meaning embedded in a word, label or symbol. Also, it is important to note that the “terms ‘concepts’, ‘codes’ and ‘categories’ generally mean the same or similar things (Birks and Mills, 2011:89). However, for ease of understanding in this thesis, the hierarchy begins at the top with a core category and integrated categories, followed by codes/properties attached to each category.

Open coding is the starting point in the grounded theory process, and Robson (2002:387) postulates that making any interpretations that lie within the data “need careful teasing out”. A useful piece of advice given to me by Barry Chametzky, an Editor for the Grounded Theory Review journal, (email communication, 2017) was to use gerunds (verbs ending in -ing) to name open codes as a way to identify process in the data (Birks and Mills, 2011), or more simply, they indicate action and movement over time (Glaser, 1978; Stern, 1984). In my study, the analysis of the incoming data from interviews patterned into the code (category) of ‘acceptance’. It was clear from the data that acceptance was a pivotal process in veterans’ lives in order to move forward in their rehabilitation. I began to name properties of acceptance such as ‘disinclination to amputate’ and ‘denial’. The following table demonstrates the early categorisation of my data from codes to tentative categories.

Table 4: The development of codes into a category

Empirical Data	Code	Category
Injury does not define you physically, I am still the same person, mentally as well.	Refusing a life defined Still the same person (IVC) Mentally unaffected Being positive	Acceptance Role-modelling Having mental wellbeing
It's about adapting from what was normal and accepting there is a new normal	Living a new normal (IVC)	Accepting Adapting-self
I wasn't going to be some wrap hand all twisted up and bitter about what had happened. You choose your branch and you take your chance.	Refusing to be bitter Understanding risk	Acceptance Rationalising Finding meaning
Don't get me wrong, I'd rather have a few extra inches of stump, to make it easier to fit my prosthetic. But overall, my life is now pretty lush	Wanting bigger stump Enjoying life	Pragmatic acceptance of limitations Acceptance
How would it be for my daughter when I turned up to pick her up from school? Would she get picked on by other kids because her daddy was a freak? Would Becky stay with me if I looked like this? Would it be better for me to lie here and die or was my life worth fighting for? My mind was racing with questions I couldn't answer	Wanting answers Concerned for daughter's welfare Mind racing (IVC)	Dealing with uncertainty Questioning

IVC: In-vivo-code

Through the open coding phase, the researcher is searching for a core category, which is the central phenomenon around which all other the other categories are integrated (Strauss and Corbin, 1990) Specifically, in CGT, core categories are codes that demonstrate resolutions to problems, or problems being processed in social life. It is commonplace in CGT for the core category to be a basic social process, which means that it is processual with two or more emergent stages (Glaser, 2005; 1978).

Open coding continued until the **core category** had emerged (Facing Losses), and then the coding process changed from being **open** to **selective**. Hernandez (2010) explains that selective coding encourages the researcher to solely code for data that relates to the core category, so I continued gathering data through theoretically sampling my sources of data, until I was able to group codes into categories, and reach theoretical saturation (Birks and Mills, 2011; Holton, 2007). For example, the category 'dealing with uncertainty' arose through numerous rounds of grouping codes, and re-categorisation, in order to make sense of the data, and its relation to 'facing losses'. It became very clear that veterans used strategies such as 'receiving confirmation' and 'comparing' in order to manage and cope with their uncertainty.

Coding without using the CCM can often result in an abundance of codes and a difficulty in conceptualising the data (Glaser, 1998). In my experience, managing the vast array of data sources did prove to be problematic at the start, and I had generated 98 separate codes from the data. I found I wasn't using the CCM, hence why I was struggling to develop any sort of theory, but once the method was used, I began to condense the codes to a total of 50. It became clear that some codes were repetitive,

or a few of the codes could be collapsed into one single code. It is often the case in grounded theory that re-naming the codes occurs frequently in order to capture the best meaning possible (Glaser, 2011, Giske and Artinian, 2007). For example, my analysis generated a code that I labelled as 'pushing through' to denote what veterans were doing when faced with adversity. In an attempt to conceptualise more, I renamed this code 'refusing to giving up' as it better represented veterans' recurring behaviour. This process continued until months later I discovered that 'resilience' replaced prior codes as it captured the behaviour that veterans were engaging in, and it subsumed many other codes as well. It was at this point in my study that I truly understood what was meant by "personal pacing [and] trusting to preconscious processing" (Glaser, 1998:49-50). It meant that the researcher needs to understand it takes time to conceptualise, that tolerating confusion is a must, and to avoid rushing or forcing the analytical process.

3.3.1 Constant comparison and substantive coding

The constant comparative method (CCM) assists the researcher in formulating a theory that is consistent, plausible, and close to the data (Glaser and Strauss, 1967).

Furthermore, Glaser (2002) explains that constant comparison helps the researcher to generate their own concepts and avoid using the received concepts that could force the data. Therefore, the CCM is pivotal to the development of the codes themselves and should determine if the data is continuously supporting the emerging codes (Holton, 2007). Moreover, there is a need to persevere with the tedium of the process otherwise conceptualising the data is likely to fail (Glaser, 2002; 2010).

The constant comparative method (CCM) can be used as a general approach to analysing qualitative data into codes (Hewitt-Taylor, 2001), but the procedure is mainly associated with Grounded theory (Parry, 2011). Simply put, O'Connor, Netting and Thomas (2008) explain that constant comparison seeks to ensure that all systematically generated data is compared to all other data in the data set.

Whilst open coding I engaged in the CCM with the aim to develop codes in the data through coding and analysing concurrently (Taylor and Bogdan, 1998). The CCM method can be used for both quantitative and qualitative research, but nursing researchers tend to use qualitative data (Hernandez, 2010), as was the case in this study.

I used the CCM to compare and contrast developing codes throughout the analysis by comparing incident to incident,¹ code to incident, and code to code, to extend the developing categories.

I was guided by the use of a set of questions posed by Glaser (1978:55) in tandem with coding, in order to conceptualise the data through the use of the CCM:

- What is this data a study of?
- What category (code) does this incident indicate?
- What is actually happening in the data?

¹ An incident is the empirical data which can be a few words, a sentence, or even a paragraph that indicate a code

- What is the participant's main concern?

The comparison of incoming data to the coded data allowed me to visualise relationships between codes, which directed further sampling.

In order to be mindful of me, as a researcher, carrying out these analytical procedures, I constructed a chain of evidence to document how often codes appeared across a category with interview data (appendix seven). Urquhart (2013) supports this activity and explains clearly that it is both constant comparison and theoretical saturation that allow a researcher to provide numerous instances (incidents) of codes. Moreover, Silverman (1993) notes that counting how often a code occurs can aid a researcher in determining whether their impressions gained about 'what is happening' in the substantive area is in accordance with reality. I found documenting the chain of evidence re-iterated that my developing theory was grounded in the data. The following table provides an example as to how the CCM method was used in this research.

Table 5: Example of code development through constant comparison

Codes	Category/properties	Concept
Keeping military identity	Finding meaning	Facing losses
Feeling demotivated	Goal setting	Facing losses
Feeling worried about family	Questioning relationships	Dealing with uncertainty

Missing comrades	Loss of professional identity	Pragmatic acceptance
Moving on	Coming to terms with losses	Pragmatic acceptance
I was only worried about my guys (IVC)	Being altruistic	Dealing with uncertainty

3.4 Writing and sorting memos

Memoing can be beneficial to all qualitative approaches, but it is generally associated with grounded theory (Birks, Chapman and Francis, 2008). Memo writing is an important part of theory development as it allows the researcher to record theoretical insights in the coded data. Lempert (2007:245) explains that “memo writing is the methodological link, the distillation process, through which the researcher transforms data into theory”. Moreover, Glaser (1998) explains that whenever a researcher has a thought or idea about codes and their relationships, a memo should be written. Birks and Mills (2011) also add that it should be an uninhibited process that encourages the exploration of ideas, instincts and intuition in relation to the substantive area. Montgomery and Bailey (2007:68) also pose that memos detail the “researcher’s thinking processes rather than a description of a social context”.

Memo writing is a continuous process that begins at the start of open coding and continues to the end of the study when writing-up the theory. In my study I found memos to be the concrete blocks for building my theory, but it was a steep learning

curve at the beginning of the study. I started memoing as soon as I had begun open coding and using the CCM, but was using one document to both code and memo simultaneously. Therefore, when I coded incidents in the data, I tended to write memos alongside the codes. This led me to find it difficult to conceptualise the data i.e. raise the data in a more abstract manner. I found the memos to be very descriptive in nature (where I had very little space to write freely), but I was fortunate to be given the advice by a fellow from the CGT institute, to keep the coding and the memos separate (Helen Scott, Skype call, 2014). By heeding to this guidance, I found my writing to be less constrained and I discovered my ability be more conceptual. The memos were used to help me think about the data and discover ideas, which aided theoretical sampling. Each memo was written in Microsoft Word and titled with the code I was writing about, with the date of entry e.g. *choosing to amputate 27/06/13*. By doing this, I was able to keep track of my data, ideas and hunches, which Charmaz (2014) describes as interacting and conversing with the data. Cross-referencing the generated coded and categorised data also enabled me to retrieve 'grounded quotes' for writing the theory (Thomas, 2013). Using memoing as a tool whilst coding, using the CCM, and theoretically sampling, I was able to reach theoretical saturation of my categories. I then began sorting my memo bank into the theory of facing losses through being playful with the memos, by cutting them up and moving them around to see how the theory might fit together. In CGT terms, sorting memos is critical to formulating the theory for presentation as it enables the researcher to develop the theoretical outline (Holton, 2010). Examples of memos in my study are provided below.

Table 6: Table of memos

<p>Memo 7: Choosing to amputate 27/06/13</p> <p>There seems to be an obvious contextual difference between veterans that lose their limbs on the frontline and those that keep their limb intact, but face amputation.</p> <p>Veterans who eventually make the decision to have their limb amputated experience things differently to those who lost limbs on the frontline. The act of <i>choosing to amputate</i> is a process in itself which often leads to the view that it will lead to a better quality of life, however the decision has not been easy to make. Some veterans take ownership and go through a decision-making process in order to come to a decision. Nevertheless, I have noticed that some veterans find it very difficult when they are faced with amputation. It seems too much for them to contemplate, but it is clear that the steps veterans take next are critical in order for them to deal/cope/accept their situation. I need to find out more about how decision-making is carried out and what strategies veterans use.</p>
<p>Memo 12: 15/07/2013- Feeling disabled and awareness of amputees</p> <p>Experiences of pain, a lack of healing and feeling disabled is an obstacle to their recovery- veterans <i>give themselves time</i> to heal but factors such as pain, infection and disablement is too much to bear, which leaves them with a dilemma. Some veterans have an <i>awareness of amputees</i> through personal experience i.e. one veteran described his mother being an amputee and how that helped him come to terms with his injuries. Another detailed having friends who were amputees and saw these experiences as beneficial and set his mind at rest when faced with his own amputation.</p> <p>Are there other strategies that these veterans use in coming to a decision?</p>

Memo 3: 20/07/2013 Strategising for amputation

I have taken the time to focus on what strategies veterans adopt when faced with an impending amputation. It has become clear that veterans' decision-making consists of: *Information-seeking. Comparing, interacting with amputees, seeking counsel, receiving opinions and observing other amputees.* They are not sequential, but each veteran adopts these strategies in order to come to decision, and be at peace with their chosen path. This emphasises their need to rationalise. All veterans come to a decision that amputation would give them a better quality of life. Some were quick at making a decision (what enables a quick decision?), whilst others needed more time to ensure they were making the right choice (How is this experienced?)

As well as analytical memoing, Birks and Mills (2011) explain that memos can be used to document reflections on the research process and decision-making. I followed this advice and wrote memos about pivotal moments in the research process, such as writing about my preconceptions, formulating interview questions, and my data sources, which are placed within the thesis.

3.5 Theoretical sampling

It is clear that coding and constant comparison are key processes, and a third is ***theoretical sampling***. This method is essentially carried out in tandem with the constant comparative method, whereby the former is the process where the "analyst jointly collects, codes, and analyses his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges" (Glaser, 1978:36).

This means that the researcher has to allow the emerging codes to decide where to

sample and collect data next (Urquhart, 2013). Furthermore, Strauss (1987) adds that theory-driven sampling enables the researcher to scrutinise concepts from various angles and question their meaning in the emerging theory.

Early interviews incorporated the grand tour question of “how are you?” to trigger a conversation, but as analysis continued and the core category became known, I asked more specific questions to veterans, as the theory was taking shape. Glaser and Strauss (1967) were clear that incorporating additional participants to extend the theory should be based on theoretical relevance in the developing categories. For instance, it became clear in the data that veterans used certain strategies to come to accept their losses, so I was directed by this emerging pattern, and theoretically sampled later interviews and follow-up email conversations. For instance, I asked a veteran directly about acceptance and it triggered a long conversation about his experiences and what helped him come to accept his limb-loss. Also, due to the diverse data sources I had available to me, I could sample and ask questions of the written and visual material to gain further insight.

Theoretical sampling and constant comparison continue until theoretical saturation is achieved (Glaser, 1992), whereby further comparison of incidents in the data do not produce any further insight into the categories (Holton 2007; Glaser and Strauss, 1967). Therefore, once a concept is deemed to be theoretically saturated there is no need to keep collecting data on this concept and the researcher should move on to saturating other concepts using the constant comparative method (Glaser, 1978).

Similarly, once all the concepts have been saturated the researcher's attention should be diverted to theoretical coding and the conceptual sorting of memos.

3.6 Theoretical saturation

Theoretical saturation is the concept put forward by Glaser and Strauss (1967) to help researchers decide when to stop theoretically sampling for data relevant to a category (Birks and Mills, 2011). In order to know when to stop collecting data, the researcher experiences saturation when no additional data are being found which the researcher can use to develop the properties of a category (Glaser and Strauss, 1967). Therefore, in more general terms, theoretical saturation has been defined as informational redundancy (Sandelowski, 2008). It was necessary for data saturation to occur in my study to help ensure that adequate information had been gathered to accurately reflect the perspectives of the veterans. However, as Pergert (2009) explains, saturation is always a subjective judgement and the decision to stop collecting and analysing data is usually impacted by time and resources. The approach to data analysis in my study was an iterative, and sometimes recursive process, and I did find it difficult to stop collecting and analysing the data. However, I did reach a point in the research where I had to accept that I would not capture all the behaviour of veterans, and that my theory found new insights, and areas for further research.

In my study, the interviews were used as the primary source of data, and the other sources were used to theoretically sample and saturate the developing codes and categories. Once I had managed to pin down the main concern of my substantive area, which was: *how to deal with their physical, mental and professional losses*, I could

begin see what my theory was about. Searching for the core category took a long time and naming the category I found difficult. Giske and Artinian (2007) also documented their struggles with identifying the core category in their study of the diagnostic phase on a gastroenterology ward. I used the strategies they adopted to come to a decision, such as drawing diagrams and making pictures, which I found extremely useful. After this, I asked myself: 'what are these veterans doing?', and after a while I spurted out: 'facing the losses'. I went back to the data and I could apply the tentative core category across the data set, and this indicated the start of *selective coding*. Now that I could elucidate the main concern and the core category, my attention turned towards coding only for incidents related to core category.

My diverse data sources allowed me to theoretically sample data from further interviews, written documents and other platforms to saturate codes and form the categories. Importantly, Glesne and Peshkin (1992) state the value of document collecting in corroborating interviews and generating further trustworthiness among the data. Assistance in achieving theoretical saturation was also facilitated through attending four CGT troubleshooting seminars (I presented the theory development at three) where I received continuous constructive feedback on my research.



Figure 4: The theory development of 'facing losses'

3.7 Summary

Chapter three has provided the reader with a detailed explanation of the methodological approach adopted to provide an answer to the research question and the objectives guiding this study. Specifically, the methodological steps that are inherent to classic grounded theory have been used to guide the analytical process. Each step provides a discussion surrounding the decisions made during the analysis, which are supported with extant literature, and examples from the data analysis are provided. The theory of 'Facing Losses' is presented, described and explained.

CHAPTER FOUR:

Research Findings

4.1 Introduction

The previous chapter provided the reader with an overview of CGT principles and how these were applied to generate a substantive grounded theory (Glaser, 1998). This chapter has five parts. Part one offers an overview of the of the data sources and the key findings, specifically the grounded theory of 'Facing Losses', its three categories, and their properties.

Face-to-face and email interviews were used as the primary source of data, and other platforms were used as secondary sources to support theoretical sampling (Urquhart, 2016). Together, this data helped to build the categories in the process of facing losses, and follows the grounded theory philosophy of using data slices (Glaser and Strauss, 1967) in order to maximise the concepts generated. Note- some direct quotes contain expletives but were kept as they represent the normal language of veterans.

The broad research aim was to investigate the impact of combat-related limb-loss on the lives of veterans from their perspective, and generate an explanatory framework. The theory is presented diagrammatically to enable the reader to visualise the psychosocial processes that veterans faced on the frontline, in hospital, rehabilitation and upon medical discharge. Parts two, three and four of this chapter are devoted to the stages and properties of the grounded theory. Part five provides a summary of the

theory of Facing Losses with some discussion around the authenticity of the data sources used in the study.

4.2 Explanatory framework of the grounded theory

The key findings are written in a conceptual manner similar to that seen in classic grounded theories (Thomas, 2013; Yalof, 2012; Elliott, 2007) that explain how veterans dealt with their physical, mental and professional losses. A depiction of the theory (explanatory framework) including the stages and properties are presented in the ensuing diagram, and shows the process that veterans engaged in through facing their losses by dealing with uncertainty, acceptance and finding meaning.

4.3 Stages and properties of facing losses



Figure 5: The theory of facing losses

4.3.1 Stage of dealing with uncertainty

The stage of facing losses represents how veterans deal with life after their physical, mental and professional losses in order to move on and adjust to being an amputee. Prior to sustaining injury, they often express pride of being at the peak of physical fitness and their enjoyment of being in the military, with clear plans for their future:

I was doing the job I loved amongst some great blokes...and I was as fit as a butcher's dog. I was confident in myself and my job and I knew where I was heading. It really could not have got any better (Andy Reid, Autobiography, 2013)

I had a really good life mapped out, I was really doing well (Travis Mills, Documentary, 2013)

I had my heart and mind set on being a career soldier (Vic Thibeault, Facebook interview, October 2013)

Despite being aware of the risks of getting injured, veterans often do not think that injury will happen to them, as the following comments demonstrate:

I'd never given the possibility of getting hurt a second thought in Afghanistan (Mark Ormrod, Autobiography, 2009)

As a soldier going to war you always know that something like that could happen, but you really don't think about it (Dale Beatty, Healio, January 2014)

...every soldier is superman until they are really hit. Never thought it would be me (Vic Thibeault, Facebook interview, April 2014)

Consequently, when injury does occur, they face an overall **uncertainty** about their immediate situation and what their future holds. Evidence of these uncertainties is apparent when veterans are able to maintain consciousness after becoming injured and can recognise the extent of their injuries. In particular, injuries caused by explosive devices mean that in an instant their position changes from having a functional role in a cohesive unit, to one that is dislocated and alien to them, which results in distress:

I was screaming but not because of the pain. It was the fear of the unknown (Andy Grant, Help for Heroes website, 2013)

It took me a while to come around, but I was shitting myself as I didn't really know what was happening. I was screaming and shouting to the lads (Mark Ormrod, Interview field note, 2013)

When they come to realise that they have sustained serious injuries they immediately worry about their survival, whether they will see their families again, and what life will be like after their injury:

I remember looking at what was left of my legs and thinking, 'I'm fucking dead here'. I knew it wasn't going to be long until I was gone (Neil Heritage, The Row To Recovery, Autobiography, 2012)

About six seconds I guess later, I woke up... the last thing I said was about my baby girl, am I ever going to see her again, you know, and then I was out [lost consciousness] ...I was really worried about what life was going to be like afterwards, you know, with all this (Travis Mills, A soldier's story, Documentary, 2013)

Veterans also agonise about their survival having a negative impact on their families and question whether their relationships with their partners will become fractured:

How would it be for my daughter when I turned up to pick her up from school? Would she get picked on by other kids because her daddy was a freak? Would Becky stay with me if I looked like this? Would it be better for me to lie here and die or was my life worth fighting for? My mind was racing with questions I couldn't answer (Mark Ormrod, Man Down, Autobiography, 2009)

At this point they are incapable of knowing what the outcome of their injuries will be, but some veterans deal with their uncertainties by fearing the worst, and seeking out trusted comrades to pass on messages to their loved ones:

The guy I considered my best friend, I called him over and told him to tell my wife and my kid that I love them and I'm sorry that I wasn't coming home (Larry Draughn, The Dayton Daily News, 20th March 2014)

However these uncertainties are experienced, **getting reassurance** from medics and comrades can assist in alleviating their anxiety:

The medic was called Gabby and she was phenomenal. All the lads were around me telling me I was going to be alright (Will Dixon, The Row To Recovery, Autobiography, 2012)

Somebody was beside me, reassuring me that everything was fine and that I would be on Strictly Come Dancing next year, sounds stupid shit but I have to say I did find it helpful (Andy Reid, Autobiography, 2013)

Aside from their personal uncertainties they also anguish over the welfare of their comrades, and react by ***being altruistic***, as the following comments demonstrate:

I was yelling at him [the medic] to get away from me...I told him to leave me alone and go help my guys (Travis Mills, The Denver Post, 29th January 2013)

I was worried only about my guys, not myself (Bryan Anderson, Autobiography, 2011)

Veterans' selflessness is shown further through their actions when they seek to protect the lives of their comrades whilst being seriously injured. This is highlighted by a veteran who secured the safety of his comrade despite having significant upper-limb amputation:

...he provided immediate aid to his battle buddy and ignored his own wounds to help get his unconscious battle buddy to safety (Vic Thibeault, Facebook Interview, October 2013)

Similarly, another veteran with traumatic amputation details the guidance he gave an inexperienced comrade to clear a minefield:

I was able to tell him what to do. 'Clear a path towards me. Start your mine clearance drills. Be careful but hurry up. Just do what you have to do. Remember the training' (Mark Ormrod, Autobiography, 2009)

Therefore, the welfare of their comrades is paramount but eventually they are urged to focus on their own condition and receive immediate lifesaving treatment:

People were being quite firm with me saying, 'We're all okay, get yourself sorted (Will Dixon, The Row To Recovery- Autobiography, 2012)

He [medic] told me: 'With all due respect, Sgt. Mills, shut up. Let me do my job (Travis Mills, CBS Evening News, 11th October 2012)

There is an urgency to get injured combatants to the nearest military hospital as soon as possible:

The sooner you can start definitive care in that golden hour the better folks do...The sooner we get to them, get the resuscitation going, get blood back into them, stop bleeding, get oxygen in them, the better those other tissues do. You have less overall damage to the body as a consequence of the trauma. (Brandon Horne, The Dayton Daily News, 20th April 2014)

I knew I was in what we call the 'golden hour'- the 60-minute survival window from the point of impact to getting into expert medical hands (Andy Reid, The Royal British Legion website, 22nd April 2014)

However, when their comrades also become injured veterans are forced to separate which creates anxiety and again ***getting reassurance*** from others is important:

Si [comrade] kept telling I was fine. 'You're going to hospital and Mick's going as well. You'll see him in hospital.' (Neil Heritage, The Row To Recovery, Autobiography, 2012)

Aside from their injuries, veterans also have to face the disconnection from their comrades when they leave the battlefield, and this is a heavy loss for them, as they are

used to being with their comrades in a cohesive unit twenty-four hours a day, as one veteran describes:

We train together, live together, and work together. We build a bond so that when faced with death or serious injury we would rather go forward and face the enemy than risk letting down our friends and comrades (Andy Reid, Standing Tall, Autobiography, 2013)

Therefore, the relationship these veterans have is tight, but when their close proximity to each other is fractured, this can be extremely difficult for them:

The hardest part is knowing your unit is out there without you (Bryan Anderson. Facebook Interview, 2014)

I was lost without being around the lads. I found it hard to cope being on my own. Well, I know I wasn't really alone, just wasn't with my boys. (Andy Grant, Interview field note, 2013)

An important moment in a veteran's recovery is reconnecting with their comrades, as being separated for a period of time takes its toll on their wellbeing. One veteran explains the emotional nature of seeing his comrades again:

We went into the mess and all my section were in there waiting for me. I cannot express how good it was to see them all again and how much it touched me. The last time we had been together was less than a month earlier, yet it seemed like an eternity in terms of where we were now. I was very close to tears and so were they – but we hid it well behind man hugs (Andy Reid, Standing Tall, Autobiography, 2013)

At some point between receiving lifesaving treatment on the frontline and receiving medical care at the nearest military hospital, they tend to lose consciousness. During this stage they undergo immediate surgeries to deal with their complex injuries, as the nature of combat-injury resulting from explosive devices often causes numerous injuries:

...physical damage included losing an arm, a leg, a testicle, a buttock and numerous internal injuries (Ben McBean, personal website- biography, 2012)

...sustained 37 separate injuries (Andy Grant, personal website- biography, 2013)

Therefore, with regards to limb-loss, veterans can experience both traumatic amputation as a direct result of explosive devices, and unavoidable surgical amputation in order to preserve life in the acute stages after injury. Attempts are made to salvage their limbs where possible, but blast injuries often cause foreign bodies such as dirt, rocks and other debris to become embedded in the body, which can have life threatening consequences, as a surgeon explains:

What happens is that the tissues are literally ripped away from the body. You get dirt [and] mud in Afghanistan, there's like ditch water which is full of animal material that gets blasted into the skin and the soft tissues, and that triggers a huge response in that person's body." (Shehan Hettiaratchy, Walking Wounded: Return to the Frontline- documentary, 21st February 2013)

Subsequently, this means that veterans can become single, double, triple or quadruple amputees as well as having significant other injuries. After some time, they are then transferred back to the United Kingdom or the United States for further medical care.

In this acute period in hospital, the high doses of medication they receive cause them to drift in and out of consciousness which can last for days to several weeks. As a consequence of receiving medication their awareness of reality can be affected, and it takes time before they become reoriented, and can make sense of their situation:

I was sober enough to recognise my parents and Becky in the room, but the drugs were doing strange things to my head...I tried to take on the news [limb-loss] at the same as working out what was real and what was a dream (Mark Ormrod, Man Down- Autobiography, 2009

You do not immediately switch from being spaced out on drugs and adrenaline to super-focused. It comes and goes. Sometimes you are right on the button, know exactly what is going on, and can carry on a sensible conversation. On other occasions you are on the bridge of the Starship Enterprise.” (Andy Reid, Standing Tall- Autobiography, 2013)

The degree of uncertainty that combatants experience can be reduced through their ***awareness of other amputees*** in the hospital, rehabilitation centres, and those that did not survive. Specifically, they make comparisons between themselves and other combatants, as a way to make sense of their situation:

I draw great strength from their loss, the fact that I am still here (Andy Reid, Standing Tall, Autobiography, 2013)

There are guys worse off than me (Will Dixon, The Row To Recovery, Autobiography, 2012)

However, a combatant's recovery can be more arduous when they cannot make any comparison to others, which in turn increases the level of uncertainty. This is particularly apparent when the level of injury a combatant sustains is more severe than others:

I wanted to find someone with the same injuries who used prosthetics. There were people who'd survived traumatic incidents and subsequently had their legs amputated but there definitely weren't many who'd had their legs blown off and survived. There was certainly no one walking around doing it. (Neil Heritage, The Row To Recovery, Autobiography, 2012)

Specifically, Neil Heritage sustained bilateral above knee amputations in Iraq, 2004, and around that time he and his comrade Mick were one of the first to survive such injuries. As a result, Neil's experience was different to veterans who became injured later in the Iraq and Afghanistan conflicts, as he describes:

The limb centre councillor just said matter-of-factly. 'Get used to your wheelchair'. It definitely set me back mentally. For several days I lay there thinking, 'That's it, I won't walk again'. Whereas nowadays, with the advancement of medical treatment, it's almost routine for guys to survive as double or even triple amputees. (Neil Heritage, The Row To Recovery, 2012)

Uncertainty also manifests itself in other ways whereby they lack confidence and feel that their current state might be off-putting to their partners. However, once they

receive confirmation that their condition does not alter the way their partner's feel for them, this gives them peace of mind and is vital to their recovery:

The unconditional quality of Caroline's love for me after I came home from Iraq helped me feel at ease with who I had become. I couldn't have asked for anything more than that...for the longest time, though, I thought I was only half a person- half a body. I thought that mattered. It really doesn't. Being with Caroline made me feel whole again, like a real person, not just half of one. (Bryan Anderson, No Turning Back, Autobiography, 2011)

The level of uncertainty can be greatly reduced when combatants have prior knowledge of limb-loss:

She (Andy's mother) explained that the surgeons had just told her that the only way they could improve her mobility was to amputate her leg just below the knee...So, when I suffered my own injuries I was no stranger to the demands that it places upon the injured and their families, and I also had a pretty good idea of the demands it would place upon me. In particular, adapting to the loss of my right arm was considerably helped by my previous experiences. (Andy Reid, Standing Tall, Autobiography, 2013)

I was a below knee amputee. One of the lucky ones. I had friends who'd suffered the same injury and I knew that, while my rugby playing days were over, I would be able to live an active life in the future. Having that knew joint intact was absolutely crucial to my future. (Will Dixon, The Row To Recovery, Autobiography, 2012)

However, those who do not have prior experience of limb loss face uncertainty in hospital regarding their future ability. This is particularly apparent whilst they are

residing in hospital and experience countless number of surgeries, and are waiting their wounds to heal, so they can move on to rehabilitation.

There are four stages to an amputee's recovery: pre-hospital, specialist hospital, rehabilitation unit, and civilian life. It is within the specialist hospital that they seem to experience the most disorganisation. Before they become injured, they live life in the military in a structured way, and when they experience limb-loss that structure becomes eroded. In particular, they find it difficult not having most of their tasks pre-determined as a couple of amputees explain:

I found it difficult not waking up at 6am, getting showered, making myself presentable and getting on with my usual day (Vince Manley, Interview field note, 2013)

I hated not being on patrol, being with the lads, and just being a soldier. When I was in that hospital bed I just missed my old routine (Mark Ormrod, Interview field note, 2012)

In hospital, having an injured comrade close-by who is going through the same experience can also reduce uncertainty, specifically regarding the strong opioid medication they receive in hospital. They can engage in ***competing*** with one another which is viewed as a normal process in military environments. A good example of this is when they rationalise stopping their morphine medication, as one veteran describes:

As soon as I learned my brother in arms next door had quit his morphine doses, I decided to stop using it as well. The pain endured was great, but the pride would have none of it (Simon Mailloux, published article, 2012)

Ceasing strong opioids is a turning point in a veteran's recovery. As described earlier in the findings, medication alters their cognitive ability, but stopping the medication helps their decision making and they can make judgments about their own health, which helps to decrease their uncertainty.

One particular strategy that veterans use throughout their recovery process is **humour** and **bantering**. These behaviours are considered as a return to normality by veterans, and helps raise their spirits and helps to maintain a positive frame of mind. This can be helpful with both healthcare professionals and fellow comrades:

I learned to drive a car on a video screen, If I messed up, the car crashed into a wall and exploded. 'Hey Joe' (occupational therapist), I said with a grin, after a crash. 'Do I really need to blow up all over again?'. We shared a laugh and he said 'Sorry, Travis, that's just how the game works' (Travis Mills, As Tough As They Come, Autobiography, 2015)

The banter with other lads was an important part of our recovery. We would spend time in rehab competing against each other like we did over there (Afghanistan). It was normal for us (Andy Grant, Interview field note, 2013)

As I was being wheeled to the sergeants' mess afterwards one of the lads said it was cold enough to grow ice cream. I agreed. 'I can't feel my toes!' I quipped. He nodded and gave me a quick look. We both burst out laughing (Andy Reid, Standing Tall, Autobiography, 2013)

The banter also extends to the level of injury a veteran has experienced. Those with an amputation *below* the knee is called 'a twisted sock', meaning that it wasn't severe

compared to others. Keeping the knee joint intact is critical for a veteran to function and they often talk about '*feeling lucky*' and '*being fortunate*'.

Ultimately, every veteran wishes to maximise their potential, and what really matters is being physically capable to achieve their goals with the prosthetics they need. Some veterans choose to remain in the armed forces, but the far majority transition to civilian life. The latter is a big change for veterans, but they still wish to contribute by working for armed force's charities, connecting to comrades, remaining active and supporting their families. They take their military training forward with them, as one veteran describes:

The injuries I sustained in Afghan changed my life, but they do not define it. The skills and qualities I learned in the military are what got me where I am today. I hope to use the knowledge and skills that I have gained to continue to learn, grow improve and help setting and reaching my goals (Mark Ormrod, Personal Website, 2011)

Some veterans see ***taking part*** in extraordinary activities as beneficial to their own self- esteem and it also raises much needed funds for charities:

One thing I learned during the trip (skiing) is that with the injuries we have there is always another way, you can achieve and still do things you once did, or even things you never thought you could. It's all about how you adapt yourself and the kit you have to achieve it (Summit For Heroes, Blog, 2014)

The row has made me feel like my old self again, like I did before I got injured. I feel like that bloke again. I changed a fair bit because of my injuries- I became more reserved. I lost a lot of confidence. That's come back now since

the row. I feel back to normal now It's been more than seven years since I felt like this (Neil Heritage, The Row To Recovery, Autobiography, 2012)

4.3.2 Stage of accepting losses

Injured veterans are faced with the decision to amputate their limbs when medical interventions are failing or when they experience impactful complications, such as recurrent infections and chronic pain. Up to this point, they have spent considerable time ***waiting*** and ***hoping*** that their injuries will heal, so they can move on to rehabilitation:

Six weeks turned into twelve weeks, twelve weeks turned into eighteen weeks, eighteen weeks turned into sixteen months (Chris, Veterans MTC, YouTube, 11th November 2011)

Throughout this period, veterans' lives have been largely restricted and dependent on others:

I was heavily dependent and didn't want to be (Anthony Harris, Beyond Injury Symposium, 2nd May 2013)

I spent the best part of two years being attached to a drip in a hospital bed not having any life at all (Andy Grant, Email interview, 14th October 2013)

When the hope for healing starts to fade and they are initially confronted with amputation by a healthcare professional this can be shocking, and a strong ***disinclination*** to consider the option can occur:

...they told me I should consider amputation, just consider amputation...I couldn't. No! They told me that wasn't an option, I wasn't cutting anything off, I came in the world with it, I ain't taking it off, it's going out with me (Chris, Veterans MTC, YouTube, 11th November 2011)

However, considering the need for amputation can also be self-induced and does not come as a surprise when there is a ***personal awareness*** that their condition is not improving:

I've been thinking about it [amputation]. I mean it's killing me and I'm still in this wheelchair (Ali Briggs, Two Worlds of Charlie F- Theatrical play, 2012)

Conversely, amputation may not require much consideration at all and ***decision-making*** can be relatively quick in order to move forward with life:

The easy part was telling me I wanted to have it amputated which only took me about ten minutes...you know I wanted to play Hockey. I wanted to get out there with the two-leggers and show them I can do this (Joe Bowser, CBS Chicago, 15th February 2013)

However, for others it can take more time to come to a decision:

The weight I carried round on my shoulders for months before weighing up every option, thinking about every possible eventuality (Andy Grant, Personal blog, November 2013)

I grappled with this final solution for quite some time (Darren Carew, Summit for heroes blog, 2013)

They engage in **contemplating** their options of undergoing repeated surgeries, having their limbs fused or amputating. It is often the case that injured personnel have already experienced countless surgeries to salvage their limbs with little improvement:

Tony underwent more than 20 operations due to chronic infection over a nine month period to save his left foot, all to no avail (Tony Harris, personal website, February 2014)

...spent two years trying a variety of medical procedures (Pete Bowker, Summit for Heroes website, 26th October, 2013)

Having endured prolonged periods of time hampered by their wounds failing to heal, the need to undergo more surgical intervention with no guarantee of success is impactful:

He [consultant] told me we could have another 18 months of surgery and I could still be no better off...mentally I had reached the end of my tether (Anthony Harris, The Express, 26th August 2012)

I wanted to get on with my life (Brian Wilhelm, Trinidad Express, 2005)

The presence of pain causes an unavoidable dependence on analgesics but often fails to adequately control the pain being experienced. This situation coupled with activity restriction heavily limits their capabilities and is intolerable:

The pain, lack of mobility and haze of drugs reinforced the decision [to amputate] (Tony Harris, Personal website, February 2014)

I take way too many pain pills... I cannot run and play with my kids (Levi Rodgers, Why I chose an elective amputation, YouTube, 10th Jan 2013)

...he had got to the stage where the pain had grown too great, the ankle never regained its range of movement (Darren Carew, Summit for Heroes blog, February 2014)

The option to fuse the limb (a surgical where the ankle or knee bones are fused together to make one bone) can be an alternative to repeated surgeries; however this has severe functional consequences:

They told me they could fuse it and save my leg but that would probably mean I would not be able to run again and so many things that I would not be able to do (Chris, Veterans MTC, YouTube, 11th November 2011)

I didn't want someone coming to the door delivering a sofa and me not being able to help because of this leg. (Andy Grant, Interview field note, 2013)

Fusing can therefore salvage their limb, promote healing, and move them forward, but they are mindful that this procedure will limit their ability to carry out normal activities due to restricted movement of the joints. Similarly, amputating can also resolve delayed healing, however this means adjusting to life as an amputee which places them in a difficult but unavoidable situation, where a decision needs to be made.

There is a clear strategy of ***information-seeking*** that is used to facilitate coming to a decision which involves ***comparing, interacting, seeking counsel, receiving opinions*** and ***observing***.

Veterans engage in *comparing* their lack of improvement to other veterans who are progressing more rapidly in their recovery:

I became really jealous of other guys who were getting their prosthetics and I was stuck with a non-healing leg” (Andy Grant, Interview field note, 2013)

...other blokes who’ve lost their leg are up and about already (Ali Briggs, Two Worlds of Charlie F- Theatrical play, 2012)

Why am I still in a wheelchair? (William Leonard, USA Today, 19th April, 2011)

Through ***comparing*** themselves to others, especially amputees, they recognise that they are being held back by their injuries and that waiting for their limbs to heal is becoming more unlikely and increasingly problematic over time.

In recovery, frequently ***interacting*** with veterans is beneficial and ***seeking counsel*** from those who have been through the same experience of deciding to amputate influences their decision-making:

During my rehabilitation, Tony Harris [amputee] advised me to have my leg amputated (Baz Whittingham, The Telegraph, 20th January 2014)

Similarly, ***receiving opinions*** from important contacts such as family members, friends and knowledgeable healthcare professionals contribute to the situation:

I spoke with my friends and family, and I spoke with other injured soldiers...spoke to basically anyone who would listen to me and just said to them, you know, what do you think I should do? Should I carry on my life with

this smashed up leg, or should I go for the amputation? (Andy Grant, Oppo Documentary, YouTube, 31st January 2013)

The thought of becoming an amputee can be an arduous decision to make; therefore, ***observing amputees*** is advantageous as it provides an insight into what life as an amputee can be like:

I went down to physical therapy...there was a guy doing back flips down the hallway with one leg, I was like hmm, not bad! So, er, the option of amputation started to seem a little bit better (Chris, Veterans MTC, YouTube, 11th November 2011)

I had seen during my time at Headley Court what amputees were capable of doing. It was a real no brainer (Anthony Harris, The Express, 26th August, 2012)

Awareness is shown that by not choosing to amputate the consequences are taking long-term analgesics and living a more sedentary lifestyle which is counterintuitive to the traits of a soldier. Through the knowledge they gain from ***information-seeking***, they are able to justify their decision, and there is a realisation that opting for amputation will enable them to have a better quality of life:

...it's either dragging round a leg you can't really use or actually doing everything like everybody else [by amputating] (Joe Bowser, CBS Chicago, 15th February 2013)

After 18 months I made the decision to have my leg amputated for a better quality of life (Andy Grant, Inspirational Speaker, YouTube, 1st July 2013)

***What's the point in having two legs when you can't do anything with them?
(Chris, Veterans MTC, YouTube 11th November 2011)***

Having described the decision-making process amputees go through when choosing to amputate, the behaviours of amputees who lose their limbs on tour will now be described. For those veterans who regain some level consciousness on the frontline, their initial reaction is one of self-criticality:

Mark talked about his main concern not being fear or pain, it was anger at himself for being a professionally trained soldier and getting injured. (Mark Ormrod, Interview field note, 2013)

That was it, my last memories of Afghanistan, a sudden and intense rage. I only had ten sodding days left and I would have been safely home, all my limbs intact. But no, I had to go and step on a bloody landmine like a stupid tit. I had let everybody down, especially myself. What would Claire say? (Andy Reid, Standing Tall, Autobiography, 2013).

As well as anger towards themselves, they also **experience guilt** relating to the fact that they are leaving their fellow comrades, and this loss has a devastating impact on them:

...it was my responsibility to make sure they all made it back safely. They were all much younger than I was. Out of the seven the oldest was only 22, and I felt very bad that I had left them leaderless. I was so keen to see them again. (Andy Reid, Standing Tall, Autobiography, 2013)

Losing the connection with the lads has been difficult for Andy. Spent some time detailing how you always had a comrade with you all the time. When

you showered and came back, he was there, when you went out on patrol he was there, etc. (Andy Grant, Interview field note, 2013)

Will focuses on how his biggest worry was being disconnected from the blokes (Will Dixon, The Row to Recovery Autobiography, 2012)

Veterans also make it clear that another priority is how their injuries will impact on their families and relationships. In particular, they are **questioning** how their lives will change now that they have become an amputee:

I was scared to see her (baby daughter), fearing how she would react. Internally, I was wondering if I could ever be a good father and husband again. Chloe just looked at me, smiled, and nestled right in. I was still the same to her. (Travis Mills, Tough As They Come, Autobiography, 2015)

She (Becky) had been dreading the shock of seeing me, so the fact I looked like the bloke she had fallen in love with, from the neck up at least, came as a mega relief. From that moment on she hasn't looked back (Mark Ormrod, Man Down Autobiography, 2009)

Through gaining confirmation from loved ones that their new bodies do not negatively affect their relationships is a pivotal part of an amputee's recovery.

Another important process in veterans' recovery is finding meaning from the injuries they have sustained, as a way to pick themselves up and enable them to carry on persevering through recovery. They experience 'highs' and 'lows', with the latter typically occurring in the early stages of recovery, as one veteran describes when being confronted with the totality of his injuries:

This was the first time I had seen my body full length in a mirror and it was quite a shock to see the stubby limbs and the sheer brutality of what was missing. It was like looking at a tree that had been hacked by vandals looking for firewood. I suddenly felt sick. I called off the session (physio) and went back to my bed and sobbed myself to sleep. (Andy Reid, Standing Tall, Autobiography, 2013).

When I saw myself in the mirror, I felt like half a person, and I kept thinking this way for a long time. It didn't do me any good at all (Mark Ormrod, Interview field note, 2013)

It is clear that realising their injuries can have a negative effect on their mental wellbeing, and their mental health is tested in an extreme manner. If an amputee is ***ruminating*** about their loss and has a constant negative perception of themselves, there is a delay in recovery: In particular, post traumatic stress disorder (PTSD) can have as damaging effect on their mental and physical health, as one veteran describes:

Around that time (in recovery), physically and emotionally I was very weak and I was angry, although I didn't understand the anger. The impact of my anger was felt by those around me. My mother borrowed a car from some friends and drove me around. Pray God she didn't turn left when she was meant to turn right because if she did she would just get it. I would unleash all my wrath. (Rory Mackenzie, The Row To Recovery, Autobiography, 2012)

For those who experience PTSD, it is a devastating condition that not only affects them, but their families as well. It is clear that veterans need to recognise their behaviour and accept help, however, some do experience problems in ***seeking support*** and treatment. Specifically, their inability to reach acceptance of their new bodies can be a barrier, which hampers their overall recovery time.

There were a few moments at Headley Court when I would get so frustrated with the prosthetic leg I would just take it off and fling it across the rehab room. I was a difficult patient, especially when it came to my family. I had real problems accepting what had happened to me (Rory Mackenzie, The Row To Recovery, 2012)

For those amputees who do not have PTSD can still experience problems coming to terms with, and accepting their loss. For instance, there can be an element of **denial** as a way to cope with their situation:

I was very scared to look at my own amputation. I was very scared to know what it looked like because if I looked at it then I sort of acknowledged it, and for a while initially I didn't want to...you know if I didn't see it, I didn't think about it...you know....it didn't exist. (Dawn Halfaker, Welcome to the Suck, Book, 2011)

Everyone goes through the denial stage, sitting on your arse playing the x-box stage and pissing everyone off stage. (Charlie, Two Words of Charlie F, Documentary, 2012)

It is clear that denial can serve as a coping mechanism for veterans in the short -term, but again, if they do acknowledge their loss, they cannot move on in their recovery journey, as one amputee details his experiences:

I noticed a major difference between the people who had accepted their circumstances and moved on and those who were still in denial. You could tell who was who based on which people were making steady progress in their rehab and which ones weren't. (Bryan Anderson, No Turning Back, Autobiography, 2011)

Accepting help can also be related to their struggles to come to terms with being dependent in the early stages of recovery: Veterans note how arduous it is when they realise they have lost their limbs, but when they also lose their independence this affects their sense of wellbeing:

I couldn't wipe my forehead or even scratch my nuts. As for having a shit or a pee, forget it. Looking back, I think this was my lowest point. I had always been very independent and was proud of my self-sufficiency. Yet, now I could not do even the most simple and intimate tasks for myself. My state of mind plummeted. (Andy Reid, Standing Tall, Autobiography, 2013)

For a young soldier, there is nothing harder than to have somebody care for you at all times, not allowing you to test your strengths and not being able to take chances with your ambulation status (Simon Mailloux, Published Article, 2012)

For instance, one veteran vividly describes his reluctance to ask for help, and how it was a turning point in him realising that he needed assistance, which did not mean he was a weak person:

I'd been doing that thing I do- working so hard to be independent that it took me two weeks of hell before I thought of asking for help. (Bryan Anderson, No Turning Back, Autobiography, 2012)

I went for it. I lunged and made a wild grab for the showerhead. I fell off the toilet and my shoulder hit the lid on the way down. My ribs smacked against the edge, and then I flipped and landed on my back inside the bathtub. That moment in the tub became a major learning experience for me. I had taught

myself the hard way that it's not always a bad thing to ask for help. (Bryan Anderson, Email interview, 2014)

It is clear that veterans accepting help occurs in two diverse ways: some resist initial help as they struggle to let go of their independence or experience mental difficulties, and there are those veterans that resign themselves quickly to the fact that they really have no choice in order to get tasks completed. One veteran describes how saving his best friend's life enabled him to come to terms with his own injuries:

When you join the corps you join a family. You'll make friends who'll be closer to you than brothers. You'll have a hoofing time with them. You'll fight for them, and they'll fight for you. Yeah, shit happens, but I wouldn't change any of it. I lost my legs, but I saved my best friend's life that day. You any idea what that feels like? To care that much about something, to care that much about doing your job? (Two Worlds of Charlie F, Theatrical Play, 2012)

Another aspect to ***being dependent*** is having to rely on family members to do things they would easily have achieved before their injury. One veteran describes the emotional impact one occasion of dependency had on him:

Claire was able to visit every day and quite often we would go out to the shops for a look, but that was hard for me, as I had to sit in the front seat of the car watching her getting the wheelchair out of the boot. The chair was electric and even with the battery off it weighed about 60 pounds...so watching her struggle with it when I was used to being able to handle things like that with ease was killing me. (Andy Reid, Standing Tall, Autobiography, 2013)

Another describes the thoughts inside his mind and about not being capable to help his wife anymore:

Thoughts swirled around the insides of my mind. They'd gotten me. Those damn Taliban got me. I always thought I was pretty tough. Nobody messed with Travis Mills. The Taliban wasn't ever supposed to win. I was always the sort of husband who took care of things for his wife. I lifted the heavy weights. I opened the jars. How was I supposed to do that now? (Travis Mills, As Tough As They Come, Autobiography, 2015)

Acceptance also relates to veterans' loss of professional identity when they become injured. It cannot be stressed enough that they are proud to be a soldier and the characteristics they possess, such as being fit, strong and adaptable. However, when realising their injuries their identity becomes fractured:

I was doing a job that I loved amongst some great blokes. I was confronting the Queen's enemies and I was as fit as a butcher's dog. I was confident in myself and I knew where I was heading. (Andy Reid, Standing Tall, Autobiography, 2013)

I'd invested so much time into being a soldier; into defending my country that it was like the glass I was on shattered on the floor, everything went away, there was nothing cos I couldn't be in the military anymore. Well I could, but I couldn't do what I wanted to do. I couldn't do what I was good at. Tore me up. (Jonathan Bartlett, Alive Day Memories: Home from Iraq, Documentary, 2007)

Some veterans talk about maintaining their professional identity by accepting an alternative job in the military, but the majority choose to be medically discharged,

meaning they have to find ways to deal with their loss. Veterans that stay within the military do so for a while, but often they find that the job doesn't compare to active duty. One veteran gives his account of being placed in an IT position:

Life was difficult because job I was doing was IT and computer systems and I didn't understand large parts of it. I felt if I hadn't been injured people would have been kicking my arse rather than allowing me to get away with not knowing a great deal. I felt like they were finding things within my capability to do. I didn't like it particularly. (Neil Heritage, The Row To Recovery, 2012)

There had been a tendency to get veterans back to military work as soon as possible after rehabilitation, but there is now an understanding that it is about where they can get the best functionality, and this is usually in civilian life.

When veterans realise that it is unlikely that they will be able to return to being a soldier again, this impacts on them greatly, especially for those who have wounds that are failing to heal. They live in hope of avoiding amputation and return to duty. For those with traumatic amputations that occurred on the frontline, the realisation of not returning to duty is quicker:

I knew I wouldn't be able to stay [in the military], it just wasn't possible with my injuries and I just had to deal with that in my own way (Mark Ormrod, Interview, 2013)

Some veterans also make the point that even though they do not work within the military anymore, they still keep their military identity as a couple of veterans explain:

I still think I keep my identity- as the motto goes: 'once a marine, always a marine. I also do motivational speaking and I get to focus on my achievements in the marines as well (Mark Ormrod, Interview field note, 2013)

I will always have the military values in me, and I think that is important (Vince Manley, Interview field note, 2013)

It seems that veterans do have to let go of ever working in the military again, but the values and training is engrained in them as people, which they carry forward with them as a badge of honour.

There are occasions in veterans' recovery when they hit 'rock bottom' and have to find ways of picking themselves up again, and this is usually through their **resilience**.

Veterans repeatedly voice that their military training has prepared them to adapt and overcome, however, there are still testing moments in hospital when they struggle to maintain their positivity when their condition is not improving:

Things were not going well inside my head and prosthetically things were going horrendously. I had such a high and complicated stump. The leg needed to be really, really light and it was so frustrating. The stump constantly changing shape didn't help with the fitting either. I had built up my strength again but was struggling (Rory Mackenzie, The Row To Recovery, 2012)

Getting themselves to the next stage of recovery into the rehabilitation unit is their main goal, but ridding their wounds of infection can be problematic. They are aware that they need to accept delays in moving forward to rehabilitation but countless

infections can be extremely frustrating for them, challenges their positive mindset, and their morale often drops:

...I was all set to go to Headley Court. I couldn't wait to get there and take on my new legs, but when I woke up on the Sunday morning before I was due to leave, my right stump was killing me...When we got to Headley Court I told one of the nurses that my stump was a bit tender. She looked at it and pulled a face. She might as well have kicked me in the balls. I felt completed gutted. For fuck's sake – I had been beasting myself so much to get there. I had been working so hard on my balance and upper body strength and now, just as I was about to literally get back on my own two feet, I had developed another fucking infection. That trip back to Birmingham was another really low point in my development (Andy Reid, Standing Tall, Autobiography, 2013)

What veterans need to do in order to accept their new bodies is to ***give themselves time***. All the factors mentioned throughout this chapter have an impact on how a veteran comes to accept their new lives. For the majority of veterans, they initially need to come to terms with the shock of losing their limbs, as two veterans vividly describe:

Part of the pain was the thought of what I'd become. I could hardly picture the new me...I swallowed and whispered the two words, "I quit" (Travis Mills, Tough As They Come, Autobiography, 2015)

I looked down at my smashed-up body. Then I looked at Becky and the tears started to come. It was unreal. I'd never given the possibility of getting hurt a second thought in Afghanistan, never mind approaching the New Year mangled as fuck. Becky kissed the tears off my cheeks and told me she loved

me. I wondered bleakly what the New Year had in store for us (Mark Ormrod, Man Down, Autobiography, 2009)

Once the initial stage is over, getting to acceptance can be relatively quick, but does not come without its struggles:

When I got off of the medication I could think better. I was in a bad place at the start, but I had to cope with it and move on. We all had to accept it. Just deal with it and crack on...but sometimes I admit I did struggle. It was just so hard to roll over in bed and I thought my life was going to be a fucking nightmare. (Mark Ormrod, Interview field note, 2013)

For others, the process can take a longer period of time:

The hardest part of rehab for me, at least, was to really accept what had happened to me, but I knew that was the only way I'd ever be able to go forward (Bryan Anderson, No Turning Back, Autobiography, 2011)

It was strange to wake up in the mornings, look down, and not see anything at the end of the bed where my legs used to be. That took some time getting used to (Bryan Anderson, Email interview, 2014)

I found it really hard to accept afterwards. Screws up your image. Documents hating going out as people asked questions and when people asked questions you had to talk. The hardest thing was talking to people he didn't know as they didn't understand. Describes it as going into 'this bubble', and this bubble you do not want to leave. Contains the home, work, and a select few friends, and a reluctance to interact with anything outside of this bubble. (Chris, Veterans MTC, YouTube, 11th November, 2011)

Anger can be a barrier to acceptance, but seeing other veterans further along in the recovery process is beneficial in helping them deal with their own situation:

I was a soldier, I got hurt, it's what happened. I used to be very angry about it cos I didn't know what I was going to do with my life. I thought I couldn't do things with my life and then I saw people like myself who live and prosper. Everything's groovy and I began to believe that everything's groovy and it got groovy (Jonathan Bartlett, Alive Day Memories: Home from Iraq, Documentary, 2007)

Specifically, mental health issues can hamper a veteran accepting their new life, but there is an acknowledgment that **time** is a critical part of acceptance:

I learned to accept what had happened to me about two-and-a-half years after I was injured [because of PTSD]. I only wish that it had been sooner. Because I can honestly say that since losing my leg my life is so much richer. It takes time for amputees to fully accept their new life (Rory Mackenzie, The Row To Recovery, Autobiography, 2012)

It is vital that veterans with mental health issues recognise how they impact on accepting their situation, and actively seek psychological support. It is often the case that there is a delay between getting support and coming to acceptance, as one veteran explains:

A lot of it was the medication and once I was off the medication I recognised I needed to sort my life and it was just the physical stuff at that stage and the neglected psychology. I have worked extremely hard this year, I recognised the psychology is a major thing, so I got the Psychologist working on me. I've done the BBR (Building Better Relations) course. The psychology and the BBR

course have really worked well because it helps you to recognise what you are doing, whether it is right or wrong, you recognise what you are doing. It has taken me a long time to get the support I need, but I am slowly understanding and accepting my life (Vince Manley, Interview field note, 2013)

Another aspect to the process of acceptance is ***accepting limitations***, which represents the physical difficulties veterans will experience since becoming injured. They often have to tolerate powerlessness which relates to their family life and social life. There is often a balance between knowing what they can and cannot do, and what seems to be most important is that they are contributing in some way, which is empowering and gives them some self-worth:

Mark and Becky have just had another baby and he knows that he cannot do a lot of the care for the baby because of his injuries. Becky does most of it, but he is able to do a lot more with his older daughter. That makes him feel a lot better about himself (Mark Ormrod, Interview field note, 2013)

Andy is aware of the things he would not be able to do as a Dad like throwing kids up in the air and catching them, playing chase around the house, or playing rugby over the park. However, he can offer a loving family home, good values and lots of attention (Andy Reid, Standing Tall, Autobiography, 2013)

In the social arena, ***being accepted*** by the public is seen to be an important part of a veteran's wellbeing:

You know, Intelligent good soldier, right? So, if I come across as an intelligent, fit, strong human being to someone, even though I've lost my legs then I feel good about myself, and I don't just mean like...like a peacock feeling

good...and look at me. I mean a deep down feel good about yourself...that sort of nurturing feeling (Vince Manley, Interview field note, 2013)

People were looking at me. You don't often see a young man missing a leg in a shopping centre. Anyone who stopped would get the story. I had a T-shirt made saying, 'I survived a roadside bomb'. There was a massive need to be accepted and for people to understand. (Rory Mackenzie, The Row To Recovery, 2012)

As well as wanting acceptance, veterans also show an awareness of the need to display confidence in themselves, as it can have a positive effect on how they are perceived by others:

Confidence is probably the single-most attractive quality in the world. It makes other people feel at ease, because they sense your faith in yourself, then they can believe in you, too (Bryan Anderson, No Turning Back, 2011)

Accepting help from members of the public is also appreciated, such as opening a door for a veteran, but there is also an element of ***educating misconceptions***, as two veterans describe:

...the next hurdle to reclaiming my life was learning how to get other people to see me as a person and not as a statistic or stereotype. I didn't want people to define me by my injuries. Yes, that experience is part of me, but it's not what I want people to remember about me. I'd prefer they know me by my accomplishments, my actions, and my words. I want everyone to know me for what I do, because that's what defines how I survive and who I am (Bryan Anderson, Email Interview, 2013)

I want people to think of me by what I do. I do motivational speaking, I wrote a book, I work for the RMA (Royal Marines Association). I want others to focus on my achievements, but sometimes people focus too much on me being an amputee, and that can get annoying! (Mark Ormrod, Interview Field Note, 2013)

4.3.3 Stage of finding meaning from losses

Finding meaning represents the strategies that veterans use to help themselves cope with the physical, psychological and social change when they become injured. These strategies can be utilised throughout the recovery process.

Initially, veterans spoke about how being in the military had given their life meaning and how their injuries had taken away their ability to return to being a soldier:

Before I was a soldier, I was lost and didn't have much going for me. Becoming a soldier gave me purpose and when I got injured it all went away. It was hard...so hard to take. They (military) wouldn't need me anymore, not with losing my legs (Vince Manley, interview field note, 2013)

Everyone around me kept using the term 'Life Changing Injury' and they were right. Up to that point, my career in the Marines had given my life meaning – but there's not much call for one-legged Marines (The Telegraph, 2016)

They tend to focus on what has been gained from becoming injured, as opposed to what has been lost. In particular, gaining a new partner and making new friends are beneficial to their recovery:

If I had not been injured, I would never have met Leonie, my best friend, my fiancé, plus have my two amazing children. I have made amazing friends who I would never had the chance to meet, and been so lucky with some amazing opportunities. These things plus many more have made being blown up seem worth it (Andy Grant, Email Interview, 2014)

Although losing their limbs is not viewed as positive, they switch to focus on other occurrences that are happening in their lives, as one veteran explains:

I'm not gonna say getting my legs blown off was the best thing that could've happened to me, but the experience has given me so many opportunities that I can't see it as a bad thing (Bryan Anderson, No Turning Back, Autobiography, 2011)

However, those with psychological problems have a difficulty focusing on anything but their injuries, until they **seek support**. They often have a negative frame of mind, as one veteran explains:

I even started making a list of all the things I'd never be able to do again. That was not helpful. There were times when I wouldn't leave the house on my own for long periods of time, purely down to self-consciousness. I was embarrassed by the way I looked. (Rory Mackenzie, The Row To Recovery, 2012)

Veterans are helped to find meaning by **accessing role models** in rehabilitation units. They have spent a considerable amount of time in specialist hospitals waiting for their wounds to heal. They have had to fight numerous episodes of infection and undergo several surgeries, to get to the point where they are ready for rehabilitation. It is in the rehabilitation unit where they become exposed to role models i.e., other veteran

amputees that are further ahead in therapy, or those at the same level. They are also exposed to a similar environment to a military one, which means they return to a group setting, around other comrades, which can ultimately lift morale:

I know what helped me a lot was being around another triple amputee, Joey Bozik; seeing him walking and doing things made me think I could it, too (Bryan Anderson, No Turning Back, Autobiography, 2011)

He (Todd, another veteran) was wearing shorts and a short sleeved shirt and I could see that he was a quadruple amputee just like me, except he had prosthetic arms and legs already place. He was walking on his own, unaided by a wheelchair or canes or crutches or anyone holding him up.... Just seeing him function so well encouraged me immensely. Todd's words and example proved part of the turning point for me. I came to see that what had happened, happened (Travis Mills, Tough As They Come, Autobiography, 2015)

However, not all veterans have access to role models, particularly if there are not any veterans with similar injuries. This tends to occur when a veteran is one of the first to survive specific amputations (double above knee, triple, and quadruple amputations). This can make rehabilitation very difficult for these veterans, and they tend to look for **support** and **motivation** from healthcare professionals:

There were people at Headley Court (rehabilitation unit) who had been wounded in combat but not with the same level of injury that Mick and I had. We were by far the most seriously injured guys there. The first guy to give me hope was the prosthetist, Andy Sharpe, at the limb centre in Birmingham. Andy told me: "It is possible, it does happen, I've seen people walking with legs. It may take a while but we'll get there". Everyone at the limb centre

talked to me about being patient and determined. But overall their attitude was, “You can do this, it can happen” (Neil Heritage, The Row To Recovery, Autobiography, 2012)

Veterans that do have access to role models eventually ***become role models*** themselves who help those starting their rehabilitation, and it represents a cycle of support. The camaraderie between veterans is very strong and they form new relationships, and reinforce old ones with comrades and health professionals:

The military has a brotherhood, but wounded veterans experience a brotherhood that’s even deeper. You understand what other guys are going through. You can recover and go forward together. I don’t think I’d be the same person I am today with Walter Reed (rehabilitation unit) and the staff there (Travis Mills, As Tough As They Come, Autobiography, 2015)

An important factor in finding meaning is when veterans search for an explanation to their injuries. A common thread is one where they can ***find a reason*** for losing their limbs:

I’m alive, aren’t I? I’m the same person. I’m just missing two limbs, which I lost fighting for my country. How can I complain about that? (Ben McBean, The Speaker’s Agency, 2018)

...my faith is more at play than I let on sometimes. It sucks that I got blown up, but I believe God has a reason for everything, even that (Travis Mills, As Tough As They Come, Autobiography, 2015)

When discussing about his involvement with Help For Heroes and the other charity work he does, he is obviously passionate about this by the way he

talked, and through his body language. He said “he does not do this to make his life fulfilling, he does it provide himself with the assurance that his choice to amputate his leg was not in vain” (Andy Grant, Interview field note, 2013)

I reminded myself it could have been worse, I figured I was better off than if I'd been paralysed from the waist down (Neil Heritage, The Row To Recovery, Autobiography, 2012)5

Another strategy veterans can use to cope with their situation and find hope is through their own spirituality. Specifically, **having faith in God** can be a positive way to find meaning from their injuries:

If I can lose my legs and stay alive and be with my kids, be with my wife, then that's where I need to be. You know, God has given me a second chance (John Jones, Alive Day Memories, Documentary, 2007)

The same plaque with the bible verse was there (in his room). I couldn't help but read the verse again. 'Be strong and courageous. Do not be afraid, do not be discouraged, for the LORD your God will be wherever you go'. My anger wasn't gone completely. But in my mind and soul I felt for the first time a flicker of hope. My situation sucked, yes. But I was beginning to see some perspective. I had a wife and a daughter I needed to live for, and God said he was with me (Travis Mills, Soldier's Story, Documentary, 2015)

4.4 Summary

'Facing Losses' has been proposed as a substantive CGT of how veterans deal with their physical, mental and social losses when they experience combat-related limb loss. 'Facing Losses' comprises three stages (that are not sequential): Dealing with uncertainty, acceptance and finding meaning. 'Facing' as a social process indicates

someone who is heavily occupied, or busily involved in an important activity, hence its ability to capture the meaning of veterans' behaviour. Specifically, their behaviours were discovered through the iterative processes of coding, constant comparison, theoretical sampling, and memo-writing.

It is recognised in this thesis that 'Facing losses' is one theoretical explanation that was developed by using CGT methodology. Nonetheless, it does provide insight into the psychosocial aspects of living with combat-related limb-loss.

Autobiographical works (which include documentary sources and videos) can be considered as a rich data set of "lives" to be explored and analyzed in their own right, in terms of what they can reveal about a life" (Coffey, 2004:46). Mathias and Smith (2016:205) add that autobiographies provide "a distinct combination of *breadth*- by discussing a significant portion of an individual's life- and *depth*- by revealing intimate details from an individual's perspective". It can therefore be argued that autobiographies can provide researchers with insights that may not be available to them from another single data source.

In their study, Mathias and Smith (2016) used autobiographies as a form of triangulation where interviews with participants served as the primary source of data and autobiographies were used as the secondary source. Noble and Heale (2019) explain that triangulation can enhance research because it offers a variety of datasets to explain differing aspects of an area of interest. However, triangulation using multiple data collection methods can be time consuming (Johnson et al, 2017), and on

reflection I did spend a considerable amount of time reading and listening to autobiographical works. For example, searching for relevant YouTube videos took a long time but often proved to be fruitful when a single video captured several veterans talking about their experiences. The data available from autobiographical works was rich, provided clarification throughout the study and extended the insights gained from interviews with veterans. Also, prior to data collection using YouTube videos I am glad I took the time to develop a flow-chart, which helped to avoid data overwhelm (figure two).

Mathias and Smith (2016) identify that the main drawbacks with using autobiographical works relates to how accurate participants' accounts are (recall bias), and that they can be self-serving and sensational to promote an individual's self or books (social desirability bias). As I incorporated numerous data sources as described in chapter two, I took the possible limitations of autobiographical works into account and used them as a secondary source of data to provide another angle with which to gain insight into veterans' lives.

I would argue that veterans' autobiographies are authentic in the sense that they only wrote about events that they could remember, or originated from what a knowledgeable other told them occurred in their journey. Whether there is an aspect of social desirability bias in these autobiographies is debatable although one might assume that money or hero status may have been influencing factors. Nevertheless, it is important to be clear that this study did not seek fact, more so I was interested in

the experiences of limb-loss from the accounts that veterans offered, which is their account of reality.

CHAPTER FIVE:

Discussion of the Findings

5.1 Introduction

This chapter is separated into three sections in order to represent each stage of the substantive grounded theory. Sections one, two and three of this chapter present an in-depth discussion of each stage and the associated properties of the grounded theory. Each stage is presented in a traditional manner of the classic grounded theory approach by focusing on the conceptual comparison of the generated theory and the extant literature, that are woven together. Urquhart (2013) re-iterates the need to discuss the emergent theory and critically relate it to existing theories, and Glaser (1998:206) stresses that “no theory stands alone”. Therefore, I will integrate my findings with existing literature as a conceptual theory of explanation (Thomas, 2013).

I had some initial difficulty knowing when to stop collecting and analysing data, and I discovered that I was trying to gain full coverage of the substantive area, which in reality would never be possible. I later read a passage by Birks and Mills (2011:) that helped me gain some clarity where they mention the work of Strauss and Corbin (1990:236) about the “logic of letting go”, meaning that a researcher needs to come to an understanding that the analysis will always be a work in progress, open to critique

and reformulation. Furthermore, Glaser (1978:97) advises classic grounded theory researchers to generate a theory that “accounts for a pattern of behaviour which is relevant and problematic for those involved”. Therefore, discovering the main concern of veterans which was managing their physical, mental and professional losses, and discovered the core category of facing losses, I could start to focus and build the theory.

It is clear from the data through listening, watching and reading about veterans that were continuously facing the losses that they experienced, as opposed to being consumed by their loss and their circumstances. When veterans became injured, they began a long road to recovery which was arduous and physical and emotionally testing. Through the use of the CGT approach (as described in chapter three) I have generated a theory of facing losses that contributes a physical and psychosocial understanding of veterans’ limb-loss. Specifically, this theory of facing losses depicts *how* veterans deal with their physical, mental and professional losses through dealing with uncertainty, acceptance and finding meaning.

5.2 Stage of dealing with uncertainty

Part one of this chapter concerns the first stage of the grounded theory of facing losses and seeks to discuss in-depth the stage of dealing with uncertainty and its properties. At this time, the concept of uncertainty and how it is dealt with by veterans is relatively uncharted waters, as there is a lack of military literature available in order to make comparisons to my study’s findings. Therefore, I will seek to incorporate the concept of uncertainty in other contexts including chronic illness.

Dealing with uncertainty in my theory details the process that veterans experienced when they became injured, lost connection to their comrades, woke up in hospital faced with their loss, questioned their immediate relationships, and feared for their future. The theory demonstrates how veterans dealt with these uncertainties and what specific strategies they occupied in order to face their loss.

My data suggested that when before veterans became injured, they were at the peak of their physical fitness, strong and with a planned future. When they sustained their injuries, they were faced with an altogether life that is uncertain. It was interesting to discover that often veterans did not think about the possibility of getting injured on their tour(s), and through my sources of data, I determined through a pattern of behaviour that their perceptions could have been a way of 'coping' with the risky situations that they would encounter. Furthermore, Green et al (2010) focus on the combat zone being a highly stressful environment where 'buddy' relationships are formed that were deemed critical in times of distress. In my study, veterans spoke candidly about the mutual trust that existed between comrades where "You had his back and he had yours". Therefore, protection coupled with their soldier disposition may have contributed to veterans not thinking about the risk of becoming injured.

In a study by Giske and Artinian (2009) that investigated hope and despair in the diagnostic phase on a gastroenterology ward found that when individuals experienced uncertainty, they tended to be rational by focusing on facts rather than hypothetical outcomes. Although these studies are different in context, they do show different individuals' behaviours regarding uncertainty in relation to the possibility of something

harmful happening to them. Although historical, Clausewitz (1993:117) explains that “war is the realm of uncertainty; three-quarters of the factors on which action in war is based are wrapped in a fog of greater or lesser uncertainty”. Due, Finney and Byerly (2015) acknowledge war’s enduring nature and emphasise soldiers in general adapting to uncertainty, however empirical research investigating uncertainty in veterans is sparse, therefore it is useful to examine civilian populations.

A useful definition by Penrod (2001:241) states that uncertainty is “a dynamic state in which there is a perception of being unable to assign probabilities for outcomes that prompts a discomforting, uneasy sensation”. Further work by Penrod (2007) again emphasises the impact of probability (what is/how likely something is to happen) and how it is often unknown, therefore, meaning becomes the dominant force of uncertainty. More recently, Mishel (2014:53) adds that uncertainty is a cognitive state where a person “cannot adequately structure or categorise an event because of insufficient cues”.

Mishel (1988) developed the uncertainty in illness theory (UIT) that aims to conceptualise how individuals create meaning from illness events, focusing on the early stages or downward trajectory of an illness. Simmons (2019) explains that the result of the UIT is that the person will return to their prior state of being before the illness occurred. In 1990, Mishel reworked the UIT to incorporate the entire disease trajectory (chronic illness) where uncertainty may not be resolved, and named it the reconceptualised uncertainty in illness theory (RUIT). These theories explain how uncertainty manifests itself through four key concepts: complexity, unpredictability,

lack of information, and ambiguity which have the potential to heighten uncertainty.

Hoth et al (2015) acknowledges the multifaceted nature of uncertainty and

Giammanco et al (2015) add that the uncertainty being experienced may have

biological, psychological and social factors. Etkind et al (2017) explain that uncertainty is not necessarily a negative experience; it is the individual's appraisal (interpretation of the event) and response to uncertainty that determines its impact.

Since the inception of these uncertainty theories, they have been used to investigate uncertainty in different contexts, such as those individuals living with: lupus

erythematous, an implantable cardiac defibrillator and chronic hepatitis C (Delis, 2019;

Goutzamanis et al, 2018; Carroll, McGillion and Arthur, 2014). These can be viewed as

long-term conditions (The Kings Fund, 2019) or chronic illnesses/conditions which

encapsulate medically diagnosed diseases as well as chronic states, such as disabilities

(Joachim and Acorn, 2000). Mohler and Schnepf (2010) explain that individuals living

with chronic illness have to face permanent uncertainty, which includes limb-loss as it is a life-long, enduring condition. Through immersing myself in the uncertainty

theories it became clear that they had not been used to increase our understanding of

uncertainty in limb-loss, therefore, the emergent substantive theory of my research

conceptualises the complex and often unpredictable aspects of combat-related limb-loss, and the strategies veterans used to manage their uncertainty.

Using the work of Mishel, the 'event' was the injury that veterans sustained that

triggered a state of uncertainty. In my study they were frightened and experienced

how it felt to be unsure of what was happening to them, whether they would survive,

and whether they would see their families again. Similarly, Due, Finney and Byerly (2015) state that the effects of uncertainty, such as fear and confusion are particularly apparent in combat situations. Furthermore, Simmons (2019) and McCormick (2002) explain that uncertainty is viewed as a neutral cognitive state until a person is able to assign meaning from the event. When veterans knew they had suffered an injury, they demonstrated awareness that their lives were in danger. In order to alleviate some of their uncertainty, they looked towards their comrades and medics to pass on messages to their loved ones, and to get some reassurance about their chances of survival. Specifically, Mishel (1990) explains that high uncertainty is linked to a reduced ability to process new information or predict outcomes. In a nursing context, Thompson and Dowding (2002) found that information-seeking helped to reduce nurses' uncertainty by providing some detail about how likely outcomes were to occur. Furthermore, Cranley et al (2012) discovered that managing uncertainty included behaviours such as collaborating and seeking evidence. When collaborating, nurses would ask their nursing peers for information and support, and when seeking evidence, they would search for answers from information and available resources.

Mishel (1990:256) also explains that 'inference' plays a major role in the value placed upon the uncertainty in question. Inference relates to "the evaluation of uncertainty based on examples of related situations". If the inferences are deemed positive, then the uncertainty will be viewed as an opportunity (or challenge), however if the inferences are seen as threatening, then the uncertainty will be appraised as a danger, often resulting in emotional distress, stress, anxiety and depression. If the latter occurs, there is expectation of a harmful outcome, which activates coping strategies to

lower the level of uncertainty. Some veterans had prior experiences of limb-loss, whether that be through knowing other comrades that were amputees, or having a family member experience amputation. These veterans were able to draw upon their prior understandings as a coping strategy which reduced their anxiety and ultimately their level of uncertainty. However, those veterans without prior understandings searched for information from medics on the frontline and in the helicopters, which was significantly important in alleviating their anxiety and uncertainties. However, not all veterans were able to maintain consciousness after sustaining their injuries, which meant that they did not experience uncertainty until waking-up in hospital.

It is also the case that some veterans dealt with their uncertainties regarding how their injuries may impact on their family by contemplating death and asking fellow comrades to end their life, as they could not face life as it was now. Sperber Richie et al (2002) also found in their study that a number of amputees described suicidal feelings, as one amputee explains: I had intentions to kill myself because I said to myself: 'Well, now without an arm, what am I going to do?'. Without limbs veterans viewed themselves negatively and expressed anxiety as to how their physical presence would impact on their families. Rybarczyk et al (1995) also discovered that anxiety was associated with a person's concerns for the future and fear about looking unattractive due to their limb-loss.

In order to further understand veterans' uncertainty, their behaviours can be related to Uncertainty Management Theory (Brashers, 2001; 2007), which is a framework that can be used to understand uncertainty inherent in health. The theory comprises three

uncertainty management processes: 1) the experience and meaning of uncertainty. 2) appraisals of uncertainty, and 3) communicative responses to uncertainty (Kosenko, 2014). This framework emphasises that communication is the primary method through which individuals cope with their uncertainties, and one management strategy that is frequently documented is information-seeking (Rains and Tukachinsky, 2015). This strategy was found to be an important coping strategy for veterans in my study when they questioned whether they would live or die, if they would see their families again and if their condition would impact negatively on their families. At this critical time in the immediate aftermath of a veteran becoming injured, comrades and medics were very important information providers to veterans that focused on reducing their anxiety, through reassurance and optimism.

Most veterans acknowledged the damaging effect that leaving the frontline had upon them, and this included the uncertainty they experienced in relation to their normality. In particular, they discussed the impact of becoming more lucid in hospital and recognising that their surroundings were alien to them, and there was a fear of the unknown. Some also documented the uncertainty of not knowing what was real and what was occurring only in their minds. This included seeing the parts of their body that were missing and the whole situation they found themselves in was hard to bear. Veterans' immediate reactions when they became more oriented were related to the whereabouts of their comrades and their resultant loss of a cohesive unit. In the wider literature, other authors have documented the concept of uncertainty in hospital. For instance, van der Meide, Olthuis and Leget (2015) identify that civilian individuals in hospital experience uncertainty due its incomprehensible nature, and also write about

the feeling of 'not fitting in' and 'not belonging to'. These findings are similar to veterans' experiences albeit in a different context, where they felt disconnected from their military way of life and a primary concern was for the welfare of their comrades. Veterans experienced the uncontrollable nature of becoming injured among veterans and being away from their unit impacted heavily on them. This concern was particularly apparent in those veterans who were in charge of a unit of soldiers where they often blamed themselves for leaving their soldiers without a leader. McCormick (2002) identifies that examples of loss of control pervade qualitative research but it is only recognised in the context of amputation in online support groups (Fitzgerald, 2019).

Simmons (2019) identifies that uncertainty and loss of control are mutually inclusive and influence each other. My findings support the work of Simmons, where veterans experienced a loss of control, which led to a high degree of uncertainty, evidenced by them being forcibly removed from their unit, and not knowing what was happening to their comrades. Olenick, Flowers and Diaz (2016) make the important point that veterans are a multifaceted population that incorporates principles such as rank, loyalty and customs; however veterans lose the structure they have become accustomed to in the short-term, which leads to feelings of being lost, isolated and uncertain. Furthermore, Hoth et al (2015) explain that due to western culture placing emphasis on predictability, this leads to the perception that uncertainty is aversive because it fractures an individual's sense of control. This was also the case for veterans where they experienced a state of anxiety as they could not predict, nor control what

was happening to their comrades or indeed what was happening to themselves as well.

From my emergent theory it became clear that being around other veteran amputees and witnessing their abilities was critical in a veteran's recovery and reduced their uncertainty. Having access to other amputees to overcome uncertainty is noted within the civilian literature (Ostler, Ellis-Hill and Donovan-Hall, 2014), but there appears to be an important contextual difference in the military, as my findings demonstrated that veterans specifically needed other amputees to be veterans, in order for them to understand and remedy their uncertainties. This related to veterans who lost their limbs on the frontline and also those that were confronted with the need for amputation.

In a military context, it is commonplace for rehabilitated veterans to act as peer-mentors and make visits to the rehabilitation centres to boost morale and motivate veterans. This proved to be a critical part of veterans' recovery as they were able to see another veteran mobilising on their prosthetics, which gave them hope and encouragement. The level of uncertainty in rehabilitation is very high as veterans were learning to physically function again. They were uncertain about their future and had a lot of questions about their future capabilities. This reiterated the importance of veterans having an awareness of other amputees and access to peer-mentors. When relating my findings to the wider literature, Reichmann and Bartman (2018) identify that the research surrounding peer-support for individuals with limb-loss is limited, however, Gallagher and MacLachlan (2001) did find that participants benefitted from

contact with other amputees, as they acted as a form of positive modelling to help them adapt and accept their new life. Similarly, Dunne et al (2015) reported that individuals seeing other amputees during the course of recovery was a source of inspiration. More recently, Richardson, Molyneaux and Murray (2019) highlight research that has been carried showing the benefits of peer-support in those individuals living with chronic diseases. Oaksford, Frude and Cuddihy (2005) and Benetato (2011) explain that amputees that are further along in their recovery are viewed as credible informants as they have been through similar experiences, and Gallagher and MacLachlan (2004) emphasise that amputees may act as positive role models that help to convince other amputees that they could achieve their goals. Also, Benetato (2011) adds that other's stories of survival are crucial to the post-traumatic growth (PTG) process as they help survivors to see how a shattered worldview can be reconstructed. As veterans experienced the benefits of peer-mentors, there came a time when they adopted the peer-mentor role and assisted other veterans in the early stages of their recovery. This included acting as an example of a recovering amputee by their ability to walk and manage their prosthetics, which helped to reduce other veterans' uncertainties about their future mobility. My findings indicated that clinicians do play a pivotal role in the rehabilitation of veterans, but there is a dire need for peer-mentors to be veterans.

The absence of peer-mentors was demonstrated in my study when a veteran's degree of limb-loss was higher in comparison to other amputees. This became apparent when a veteran survived bilateral above knee amputations and told me how he struggled to access other veterans with similar injuries. Consequently, he held a lot of uncertainty

over his ability to walk again. He relied solely on healthcare professionals to try and answer his questions, and give him support and guidance. Messinger, Bozorghadad and Pasquina (2018:91) confirm my findings and place emphasis on veterans building “close, enduring relationships with clinicians” throughout rehabilitation. Moreover, Jepsen, Wood and Holyoak (2019) support the need for health professionals to adopt an optimistic attitude in response to the life changing event of traumatic amputation. Therefore, it is clear that veterans can and do build relationships with clinicians whom can alleviate their worries and anxieties. Nonetheless, as the years have passed, veterans have survived triple and quadruple limb-loss, so access to veterans with similar injuries has become more commonplace in rehabilitation.

Another important factor in dealing with uncertainty related to veterans’ level of resilience in response to their injuries. This behaviour proved to be critical to veterans as they emphasised their ability to be resilient in the stories they told me, as a way to make it through the challenges they faced in recovery. There is no consensus on the definition of resilience, but in the context of the military, resilience can refer to the capacity to adapt successfully in the presence of risk and adversity (Land, 2010) or be able to “bounce back to a level of functioning equal to or greater than before” (Wiens and Boss, 2006:13).

Rashid (2018) points out that most of the literature pertaining to resilience relates to civilian populations, but there has been a growing interest in resiliency among veterans (Meredith et al, 2011). My search of the literature identified an emerging body of military research on resilience in those living with traumatic brain injuries and

post-traumatic stress disorder, but not combat-related limb-loss (Herbert, 2018).

However, one recent study by Jepsen, Wood and Holyoak (2019) explored resiliency in a qualitative study that included six veteran amputees. Veterans were asked to decide their level resilience through using a conceptual framework (Metatheory of Resilience and Resiliency). The three levels of resilience were: reintegration with loss, reintegration back to homeostasis, and resilient reintegration. The authors discovered that five of the veterans chose resilient reintegration (the highest level) and the sixth chose a level between resilient reintegration and reintegration back to homeostasis. The MRR did not become apparent in veterans' care in my study, but it may have been beneficial to those veterans who were having difficulties in their recovery. Specifically, healthcare professionals becoming aware of the MRR may have been able to assist a veteran discover or rediscover their resilience. In my study, the factors that contributed to veterans being able to be resilient included their internal and external strength, comrades, family, health professionals and humour.

Cater (2012) carried out a phenomenological study that investigated psychosocial adjustment factors in women veterans after traumatic amputation and posited that resilience may promote positive adjustment to limb-loss. Veterans in my study honed in on their ability to be resilient, which was built through their military training and service, coupled with the possession of a positive attitude. Similarly, Horgan and MacLachlan (2004) also found that an optimistic personality disposition was beneficial to a veteran's recovery, and Rutter (2007) explains that some people have a greater ability to deal with adversity. In the context of veteran amputees, Armstrong et al (2018) discovered that when compared to civilians, veterans reported lower resiliency

scores. I found this finding surprising as it was apparent in my study that veterans capitalised on their ability to be resilient, to help them cope with their loss and their uncertainty despite the challenges they were facing.

Importantly, Herrera-Moreno et al (2018) point out that amputation causes a high level of stress that challenges the coping strategies of an individual. It is clear that veterans' military training was paramount in facing uncertainty, but other factors also contributed to their ability to cope and recover. In particular, the impact of social support could not be ignored as all veterans placed emphasis on the positive role of their family in their rehabilitation. This finding is corroborated in a metasynthesis carried out by Murray and Forshaw (2013) who document the importance of positive social interactions that includes family. Also, Atkin, Stapley and Easton (2010:392) add that "coping is socially negotiated, defined by the social space in which it takes place". The presence of family in hospital and in rehabilitation instilled a supportive environment e.g. through encouragement and positivity, that contributed significantly to a veteran's ability to cope. Veterans talked about how, at several points in their recovery, they were not sure (and questioned) whether they could persevere, and made it very clear that their partners' support was critical to their progression in rehabilitation. Razaq (2019) also emphasises family being a driving factor for individuals during times of hardship and Potter et al (2018) posit that coping is an ongoing process that occurs through interactions with their social and their cultural environments. My findings also support the cultural aspect of coping in veterans where they were able to recover in a military culture, where the atmosphere felt normal to them as they were surrounded by other veteran amputees, and it promoted

discipline and hard work. Therefore, being able to cope increased their resiliency, which helped veterans face the uncertainties in their rehabilitation.

Price (2005) discovered that body image was one of the main concerns of veterans with limb-loss and existing studies demonstrate that it is common for amputees to hold negative beliefs about their body schema (Baby, Chaudhury and Walia, 2018). Veterans in my study often feared rejection from their families, felt that they would be a burden and thought that their injuries were repulsive. In my developing theory, it was advantageous to have a spouse that dispelled a veteran's uncertainty as to whether they would be accepted and loved now that they were an amputee. Gaining early acceptance proved to be a critical juncture in their recovery and Choate (2005) developed a model of resilience of body image which confirms that support from family is an effective protection factor. Although this model was based on women's body image, my study findings show that family support for both men and women veterans with limb-loss contributed to their ability to be resilient despite their injuries.

Another uncertainty for veterans was dependency and loss of independence, as they had to endure being dependent on others, particularly for their activities of daily living and to cope with their loss of freedom. The period of dependency was directly affected by wound healing, whereby a veteran could not move into rehabilitation and begin the process of regaining their independence until their wounds had completely healed. They experienced complications resulting from foreign bodies, infection, pain, frequent surgeries and skin breakdown, which all delayed their wounds from healing. These factors impacted heavily on veterans, and the uncertainty of not knowing when

or if they would heal tested their resilience. Neal (2015) found that failed wound healing was frustrating for veterans and that 'time' was a crucial factor in their recovery. For those veterans in my study with a lack of wound healing which lasted a significant amount of time often reached a point where they experienced an emotional breakdown. This was clearly evident when veterans reached a point of healing and were ready to move to rehabilitation, only to find out that a wound had re-opened or had deteriorated.

The way rehabilitation operates is conducive to the military which is indicative of rigorous training, discipline, teamwork and working under pressure (Rashid, 2018; Cater, 2012). This military culture was pivotal in the recovery of veterans in my study as they were now able to begin the process of rebuilding themselves outside of a hospital setting and into an environment that felt more normal to them.

Veterans often experienced the unknown when they first entered the rehabilitation unit. They had lots of questions about their capabilities and future abilities, but ultimately, they wanted to be the best that they could be. This meant different things to most veterans depending on their level of limb-loss, but emphasis was placed on such things as being able to walk again on prosthetics, hold their children and feed themselves. In order to accomplish these activities veterans engaged in a process of goal-setting, breaking down their goals down into smaller, achievable targets that tested them to the maximum. For instance, this was seen when physiotherapists would give veterans daily targets to accomplish by a given time and this was exactly what veterans said they needed- a mission! Specifically, Goal-setting is considered to

be an effective motivational technique that improves performance and function (Ladlow et al, 2014; Kylo and Landers, 1995). Goal-setting was an effective strategy used by veterans in their rehabilitation as it suited their way of thinking, was beneficial to their overall wellbeing, and helped them address their uncertainties (Caddick and Smith, 2014).

Unwin, Kacpersek and Clarke (2009) highlight that high levels of hope i.e. an individual's thoughts about their capability to visualise pathways to goals (and motivation to meet them) are more in tune with positive emotions, which is key in coping and the stress response (Folkman, 2008). My findings support these studies in the sense that a veteran's personality was one of optimism by default and this contributed significantly in their ability to deal with adversity. Veterans used phrases such as: "let's crack on with it" and "improvise, adapt and overcome", which were often used to motivate themselves physically and mentally, and to help them accept the things that they could not change.

Veterans visualised what they wanted to achieve and with the assistance of healthcare professionals, and the support of their families and comrades, they felt confident and optimistic. The uncertainty they had been exposed to in the hospital setting was reducing as they started to accomplish their goals. Also, creating an atmosphere of competitiveness between veterans in the rehabilitation unit was vital as it was a return to the normal way of life in the military (Cater, 2012). For example, healthcare professionals would document how far a veteran had walked on the notice board on

their prosthetics, which encouraged other veterans to compete and try to surpass the record.

It is clear that the fitting of prosthetics is a critical part of rehabilitation, but the literature clearly reports that prosthetic use goes beyond functionality by enhancing a positive identity and facilitating adjustment (Armstrong et al, 2018; Baby, Chaudhury and Walia, 2018; Burden et al, 2018; Sousa, Corredeira and Pereira, 2009). Veterans worked extremely hard in their rehabilitation to prepare themselves for prosthetic fitting, but uncertainty existed with regards to what they could or could not do once they had secured their prosthetics. This was a critical stage for veterans as they had hoped for a long time that their prosthetics would restore function to their lives and enable them to regain their independence. They experienced some resolution to their uncertainty through talking to, and observing comrades' capabilities on their prosthetics, which provided some reassurance that they would be able to achieve their desires. However, there was a minority of veterans that experienced ill-fitting of their prosthetics because of a short residual stump, which slowed the progression in their rehabilitation. Consequently, not being able to mobilise impacted heavily on their mental wellbeing. Their uncertainty changed to a feeling of certainty that they would not walk again and they exhibited feelings of frustration, anger, sadness and pessimism. It was sometimes the case that they would display uncontrollable anger towards family members, and for some time they did not recognise how their situation was affecting their physical and mental health, but when they did, they tended to be reluctant to ask for help. My findings support existing studies focusing on the barriers to help-seeking behaviours in the military that relate to avoidance and minimising their

difficulties, internal stigma (negative beliefs about the self), fear of stigma from others, and their beliefs about psychological treatment (Britt et al, 2019; Clifford and McCauley, 2019; Murphy and Busuttil, 2015; Osorio et al, 2013). Moreover, some veterans seemed to use a 'grin and bear it' attitude when encountering problems in their rehabilitation, which appeared to serve as a coping mechanism, but in some instances this attitude only delayed them accessing support. Armstrong et al (2018:168) support this behaviour and add that a "military culture to 'man up' during difficulty contributes to the psychological functioning of service members, with residual effects experienced by veterans".

Unfortunately, a short residual stump was permanent and veterans had to learn to live with the condition, but some found this difficult and they tended to stay away from exercise. They lacked engagement in their rehabilitation, which halted progress with their prosthetic fitting. Hill, Niven and Knussen (1995) confirm that coping strategies that are fuelled by emotion, such as avoidance and cognitive disengagement are associated with poor rehabilitation outcomes.

Walker (2010) highlights the sheer devastation that veterans have been exposed to in Iraq and Afghanistan and the impact this may have on their mental health. My findings indicate that physical rehabilitation alone was not adequate for veterans and some needed psychological support as well. Meichenbaum (2012) agrees and emphasises that greater resiliency comes from greater therapeutic support, that includes medical and psychological treatment. Individuals are confronted with numerous physical and psychosocial challenges after amputation (Desmond and Gallagher, 2008) and the

psychological impact of amputation can be just as significant as the physical challenges (Pasquina, Carvalho and Sheehan, 2015). Moreover, veterans' perceived loss of activity in general can impact more heavily on post-amputation quality of life than the absence of the limb-loss itself (Roberts et al, 2006). Nonetheless, Talbot, Brede and Metter (2017) explain that more empirical research is needed in a military context that investigates veteran amputees' physical and mental wellbeing in rehabilitation.

Veterans stressed the value of healthcare professionals as they helped them to become aware of their behaviour and see that they were experiencing psychological issues that were impacting on their recovery. In order to move forward in their physical rehabilitation, they needed to actively seek psychological support first, and when they did, they often cited difficulties accepting the totality of their losses. However, through psychological intervention and giving themselves time to process the changes that were happening in their lives, they could begin to accept their circumstances and adjust. These veterans' experiences clearly identify the need for access to psychological and emotional assessment during the recovery process, as they do not solely suffer from physical losses when they experience trauma (Belon and Vigoda, 2014).

Determining the causative factors that led to the psychological problems of veterans in my study, and any diagnosis, is outside the scope of this thesis, but it is prudent to provide context and relate my findings to the physical and psychosocial issues surrounding limb-loss.

Studies suggest that mental health problems in veterans may be a direct consequence of combat exposure (Armenta et al, 2018; Shen, Arkes and Lester, 2017), and mental health conditions have been associated with the stressors involved in deployment (Reger et al, 2019; Paige et al, 2018; Herman, 2013). Furthermore, Faraji et al (2018) place emphasis on the high prevalence of depression and anxiety in veterans and Tennent et al (2018) specifically focus on the negative impact of mental health problems in veteran amputees regardless of the level of their amputation. My research acknowledges the damaging effect that traumatic injury has inflicted on veterans and despite the majority of veterans not reporting any psychological ill-health, the importance of having access to psychological services as part of recovery and rehabilitation cannot be overstated.

Another aspect of uncertainty related to fear of the future, and there was a dichotomy between veterans as to how this was uncertainty was managed. Most veterans actively chose not to think too far ahead, and focused on the 'here and now', whereas others faced their future and their uncertainty through acceptance; particularly in relation to the perception that they would not be able to use their prosthetics in older age, and would have to rely on a wheelchair for ambulation. A study by Flemme et al (2011) found that people changed their view of life from being able to predict what will happen, and accepted uncertainty as being normal. Furthermore, Giske and Artinian (2008) write about how individuals protect themselves when faced with uncertainty by controlling their thoughts relating to the future. They also discovered that uncertainty was connected with 'peace' where individuals held the belief that they would be able to cope with the future. In my study, those veterans who

acknowledged uncertainty through acceptance often prepared themselves for the future, and although it was not clear as to why others did not think about their futures, it may well be the case that their behaviour was a coping strategy. The uncertainty regarding their futures was only voiced by veterans with double lower-limb amputations that is likely due to the increased effort and energy required to mobilise compared to a single limb amputation (excluding high degree single limb-loss). Therefore, veterans demonstrated an awareness that it may be difficult for them in older age to have the physical strength and energy reserves to use their prosthetics.

The vast majority of veterans in my study experienced primary amputations on the battlefield, but there were others who suffered extensive trauma to their limbs and could not move into rehabilitation until their wounds would heal (Price, Moffatt and Crofts, 2015). These veterans had several reconstructive surgeries but reached a point where they were confronted with amputation in hospital due to factors such as long-standing osteomyelitis, pain, failed wound healing, and in some cases veteran preference. Specifically, Huh et al (2011) explain that the priority for frontline trauma in the recent conflicts has shifted focus from primary amputation to limb-salvage giving veterans opportunities to undergo reconstructive surgeries through expedited care. In several cases limb-salvage has proven to be successful, but for the veterans in my study this was not the case. Stinner et al (2010) conducted a review of all amputee soldiers that had a combat-related lower extremity amputation (n=348) and discovered that 53 veterans experienced secondary/late (defined as being more than 12 weeks post injury) amputations.

The veterans in my study experienced uncertainty in relation to whether amputating their limbs was the right thing to do and agonised over whether it would release them from being dependent on others and give them back their independence. They were immobile and needed help with activities of daily living which caused frustration, sadness and low self-esteem. In a similar way, de Oliveira Chini and Boemer (2007) also found that dependence was a source of suffering and unhappiness for those with limb-loss. Veterans were used to being in close proximity to their comrades but when they saw them healing and progressing in their recovery, they often felt isolated. Being injured was taking away their soldiering identity (or sporting identity as Evans, Andreasse and Virklund (2019) discovered in their study of wounded Danish veterans) who was normally strong, courageous and never gave up, but they felt they had no control over their situation. Veterans were forced to live a sedentary lifestyle and wait for prolonged periods of time hoping for healing to happen, if it happened at all.

They focused on their options, which were to continue efforts at limb salvage, undergo limb-fusion (which may have improved healing, but often results in poor mobility) or have their limb amputated. They lived in what they called a 'haze' due to the analgesia they were taking, which resulted in an inability to function physically and mentally, and it was a horrible existence. Guilding (2017) also found that individuals viewed amputation as a way to get off the drugs and it was a decision based around function.

It is noted within the literature that amputation can have a dramatic impact on an individual's physical and psychological wellbeing (Hadi and Alayon, 2019; Holzer et al, 2014) and specifically within the veteran population (where injuries are often more

severe than the civilian counterpart) studies have discovered both positive and negative consequences of amputation on quality of life (Crowe et al, 2019; Talbot, Brede and Metter, 2017; Kurichi et al, 2015). For example, Foote et al (2015) found that post-amputation veterans still suffered with significant pain and mental health difficulties, but emphasised that they were active, had hobbies and found gainful employment. Veterans in my study wanted to be mobile and productive again but were uncertain whether amputation would give them back their freedom, and they did not want to make a decision that they might have regretted in the future. Columbo, Davies and Kang (2018) highlight that it is common for individuals to focus on the expected postoperative functional outcome, but in reality, Haldaman and Glassman (2011) explain that quality of life and discomfort varies for individuals that experience traumatic amputation on the frontline versus those away from the battlefield. Therefore, losing a limb electively through choice and being prepared for the loss may not have guaranteed a good outcome, however veterans in my developing theory reported that failing limb salvage (that often went on for months to years) was having a detrimental impact on their physical and psychological wellbeing. They experienced a complete loss of function, uncontrolled pain, low mood and felt they had no purpose or quality of life. One veteran clearly explained the impact: "I went from being a critical member of a team to feeling insignificant". Sinha and Van Den Heuvel (2011) explain that the loss of a limb is a very stressful event that can significantly affect quality of life; however, veterans felt they had no quality of life with a mangled limb.

Individuals differ in how involved they want to be in decision-making regarding their treatment. Sjodahl, Gard and Jarnlo (2007) explain that they may be passive (leaving

the decision to healthcare professionals), collaborative (shared-decision making) to highly active (make decisions themselves). Those facing amputation want to be actively involved in the decision-making process (Columbo, Davies and Kang, 2018; Hamill, Carson and Dorahy, 2010; Horgan and MacLachlan, 2004) and Gallagher and MacLachlan (2001) explain that individuals may cope better post-amputation if they know what to expect as oppose to fearing the unknown. It was important to veterans that they understood the intricacies of losing a limb and they actively engaged in the decision-making process that enabled them to face their uncertainties and justify amputation. Liu et al (2010) report that individuals can have difficulties in deciding whether to amputate a limb, but for some veterans it did not require much thought as their desperation to play sport again facilitated their decision. However, others used Information-seeking as a strategy to find out about the physical and psychosocial effects of amputation. They wanted to spend time with veteran amputees to increase their understanding about the positive and the negative impact of amputation and what life was like as an amputee. Guilding (2017) also discovered that those individuals with a choice of amputation felt lucky to develop their own awareness about potential difficulties before amputation. Veterans found out that they could still experience pain even after amputation i.e. residual and/or phantom pain, but that the pain was less, and learnt about the risk of stump complications and prosthetic problems that may occur. My findings support the work of Bhuvaneswar, Epstein and Stern (2007) that focusing on the positive aspects after amputation is beneficial, and veterans found out about how amputation had enabled their comrades to regain some normality to their lives. This generally related to such factors as being active, independent and having the ability to play with their children, and take part in sports again. As well as receiving

advice and counsel from their comrades, it was important to actually see the abilities of an amputee, so they spent considerable time observing their comrades in rehabilitation.

Veterans also sought opinions from family members who could not tell them what to do, but helped to alleviate their uncertainty by giving emotional support through comforting gestures (Benetato, 2011; Finfgeld-Connett, 2005), and providing reassurance that they would not feel differently towards them if they became an amputee. Veterans approached healthcare professionals who made them aware that becoming a below-knee amputee (trans-tibial) would mean their knee joint was kept intact, which would increase their ease of using prosthetics and often resulted in a lower healing rate compared to above-knee amputations (Crowe et al, 2019; Woodburn and Lindsey, 2009).

Studies Investigating the impact of secondary/late amputation have tended to focus on older individuals that have worsening chronic illnesses, such as diabetes or peripheral vascular disease, that are often associated with poorer outcomes (Davie-Smith et al, 2017; Bennett, 2016), whereas veterans were young and physically fit when they were facing amputation. Nonetheless, Peters et al (2019) demonstrated that some older individuals do report an improved quality of life after amputation, and this is what veterans in my study were seeking. It is possible to locate literature that mentions uncertainty in a military context (Clausewitz, 1993) but there is a lack of research in relation to uncertainty among veterans that experience limb-loss.

Nevertheless, there are civilian studies that have uncovered uncertainty in individuals.

All veterans in my study made the decision to undergo amputation as they were desperate to end their pain and suffering. Through their decision-making process they were able to reduce their uncertainty and by choosing to amputate their limb it helped to restore function to their lives and they felt “normal” again. Baby, Chaudhury and Walia (2018) identify that the personality structure of the individual helps to determine the outcome and overall wellbeing of the amputee. Veterans used their military mindset and knowledge of amputation to push through their recovery. They also felt a duty to live their lives to the fullest in order to continue justifying their decision to amputate their limb and in respect to those veterans that lost their lives, or were unable to reap the benefits of amputation. Uncertainty was a constant in their lives which was particularly apparent when veterans took part in opportunities such as adaptive sports and marathons. Being a new veteran amputee meant that they were not aware of what they could or could not do, and it required them to learn (sometimes re-learn) and adapt. The uncertainty was managed through a process of discovery where veterans would often ‘try things out’ to gauge their capabilities, which often increased their confidence. Some veterans openly spoke about their futures and not knowing whether they would be mobile in older age. They treated the unknown as a source of motivation to achieve as much as they could, whilst they could. They often minimised their situation by referring to their limb-loss as nothing more than a ‘twisted sock’ (a humorous phrase used by veterans meaning that their amputation was minor) compared to veterans with a higher degree of limb-loss.

It is important to note that not all veterans thought about amputating their limbs, and when they were confronted with the option to consider amputation, they could not

begin to contemplate the idea. The loss of their limbs triggered anxiety and they initially reacted by denying the need for amputation and would withdraw socially. Reiber et al (2010) also found that veterans from the Iraq and Afghanistan conflicts used avoidance as a coping strategy. These veterans often required 'time' to process the situation and what seemed to be the turning corner towards opting for amputation was witnessing the abilities of amputees in the gym, or through peer-amputee visits to the rehabilitation centre.

5.3 Stage of pragmatic acceptance

Part two of this chapter relates to the second stage of the grounded theory of facing losses and provides an in-depth discussion of the second stage of pragmatic acceptance, and its properties. This category provides an important and original contribution to the combat-related limb-loss literature where there is currently a paucity of qualitative studies examining veterans' experiences of acceptance, which was discovered by searching for literature in the university library database and google scholar. Due to the lack of research, I will incorporate studies investigating limb-loss in a civilian context, and will discuss some of the wider issues affecting the acceptance of loss including chronic illness. Personal and powerful reflections do exist in the literature, such as Mailloux's (2014) reflection on his road to recovery after losing a limb in Afghanistan, however from an empirical perspective acceptance has received little attention. Therefore, it is useful to examine other schools of thought surrounding the acceptance of a loss, such as cognitive and social psychology.

Parkes (1971) investigated the wider implications of bereavement theories by studying other types of loss which included the loss of a limb. He postulated that while attachment theory contributes significant insight into the loss of people, individuals were not attached to their limbs in the same way that they were to people. However, in his later work, Parkes (1988) suggested that some of the reactions to an amputation do resemble the reaction to the death of a person. In a thematic analysis carried out by Gallagher and MacLachlan (2001) found that individuals equated acceptance to a bereavement process, and more recently, Bennett (2016) explains that the loss of a limb is in fact comparable with the loss of a loved one, as individuals pass through a similar grieving process that can mirror the Kubler-Ross model (1969) for coping with dying. Nowadays, Gregory (2018) notes that the model has received criticism for appearing to denote that all individuals experience all five stages of the model, and in the same order (denial, anger, bargaining, depression and acceptance). However, since its inception, Kubler-Ross explained that grieving is not linear and people may only experience two of the stages, or none at all. In practice, Bollinger (2016) advocates the Kubler-Ross model in understanding limb-loss, but also states that each person copes their loss differently- some can accept their new image and move forward, whereas, others may never reach the acceptance stage. Furthermore, Telford, Kralik and Koch (2006) identify that the concept of denial has been transformed into an adaptive function of the personality, that serves as a way for people to protect themselves from harsh realities. Although their work discusses denial in the context of chronic illness, I argue that the experience of limb-loss is similar, as they are both life altering conditions that cannot be cured. Furthermore, Livneh, Antonak and Gerhardt (1999) suggest that there are many factors effective on coping with a disability (loss) in

chronic diseases. Also, Tuncay and Musabak (2015) add that there are positive coping strategies that help an amputee deal with their loss (religion, acceptance, planning and active coping), and there are negative strategies (denial and behavioural disengagement). Moreover, from analysing the data from veterans and comparing it to the concept of chronic illness, it is clear that acceptance and denial are both present in limb-loss and chronic illness (Telford, Kralik and Koch, 2006). Also, Bernell and Howard (2016) identify that the definition of chronic illness remains unclear and highlight the difficulties in determining what diseases or conditions are included. Kralik (2002) explains that in chronic illness a person fluctuates and moves back and forth, as the individual faces strong reactions to the loss of life as it was.

Although there are similarities between the experiences of chronic illness and limb-loss, veteran amputees are typically young and physically fit compared to the vast majority of chronic disease amputees. As a result, Benetato (2011) notes that due to a healthy pre-injury status, many veterans possess an optimistic outlook for returning to an active and fulfilling life (Dougherty et al 2010). My findings are in accordance with the work of Benetato and Dougherty et al, however a minority of veterans held a pessimistic outlook when they experienced psychological difficulties in their rehabilitation journey. Also, when veterans lost their limbs on the frontline they initially went through a multitude of different emotions and feelings that were often negative in origin, such as feeling that their families or society would not accept them.

An important aspect to acceptance relates to the reactions veterans expressed in the early part of their recovery. Specifically, when they become more lucid in hospital,

they are faced with several losses and changes to their lifestyle. Horgan and MacLachlan (2004) explain that a major challenge for individuals with limb-loss is facing the loss of their physical functioning and independence. This had a devastating impact on veterans in my study especially those with significant limb-loss involving their upper and lower limbs. The higher the limb-loss the less veterans could do for themselves which caused a great deal of anxiety. At times, some veterans could not accept their situation and often cried and voiced how they felt about abilities compared to before their limb-loss, which often manifested itself in guilt, anger and frustration. Sinha and Van Den Heuvel (2011) add that in the early stages of recovery limb-loss affects an individual's ability to carry out their activities of daily living, and in particular, veterans talked about their inability to wash themselves or go to toilet independently. Epstein, Heinemann and McFarland (2010) discovered similar results where veterans' perceived quality of life was reduced when they required assistance with their activities of daily living. Veterans recognised that they needed to accept help from professionals in order to function, but it was a battle to submit to being dependent on others in the early part of their recovery. Specifically, not being able to clean oneself after going to the toilet and not being able wash and eat independently were damaging to veterans' wellbeing. Specifically, Madsen et al (2016) write about individuals 'losing control' in the acute phase after amputation and their study corroborates my findings in that being dependent and losing control is a necessary process that individuals have to experience. It is not an easy process for anyone to endure, but particularly for veterans who are a group of young and self-sufficient men and women, it was difficult to accept.

A major difference between veterans and those living with a chronic illness lies within the context of visual disability, i.e. concerns over members of the public seeing they are visually different. For example, Kelly (1992) discovered that those with an ileostomy or panproctocolectomy experienced strong feelings of being different even when fully clothed. They were worried about how others would perceive them if they noticed a bag under their clothes. Conversely, the veterans in my study were not concerned with their prosthetics being seen as they were worn as a badge of honour, but their concern related to displaying confidence in themselves, for others to see, which helped them reach acceptance through being accepted in society. Cater (2012) highlights the importance of context where civilian women were more likely to wear a prosthesis with a cosmetic cover, but veteran women did not need to camouflage their prosthesis to appear normal. The notion that civilian amputees are likely to be negatively impacted by unsatisfactory prosthetic aesthetics has been highlighted in the literature (Cairns et al, 2011, 2014; Biddiss, Beaton and Chau, 2007; Murray and Fox, 2002), however, my developing theory found similar results to Cater (2012) (and adds new knowledge that includes men as well as women) and also reinforces the idea that veterans are more conscious of the public accepting them as individuals rather than the aesthetics of their prosthetics. Sansoni (2014:558) writes about the ability that amputees have to show people that they are not “disabled but, rather, super-abled individuals who are proud of their bodies”. This is an end goal and it takes time (dependent on each individual) for a veteran to accept and feel comfortable with their prosthetics.

In the context of denial, veterans used this strategy as an avoidance tactic. Specifically, they felt that by denying the trauma, they did not have to deal with it, and it served as a way to cope in the short-term. The amount of time a veteran used denial was dependant on the individual. It is important to add that for those who chose to amputate their limbs, the vast majority did not experience denial, however, those that did experience denial, held a strong attachment to their limbs. It was not until they witnessed the abilities of amputees that their denial started to dissipate, and was replaced with acceptance. Kubler-Ross (1969), adds that denial serves as a buffer to shocking and unexpected news, which can be related to veterans as denial seems to be a protective mechanism that gave them the time to process their loss. Reiber et al (2010) studied servicemembers with major traumatic limb loss and confirmed that denial was a common psychosocial reaction, and detail that avoidance as a coping strategy is more often utilised by veterans than those with limb loss from disease. Tuncay and Musabak (2015) also discovered that denial and behavioural disengagement led to negative effects on post-traumatic growth. PTG is positive change after a struggle with a traumatic event. This can be related to the veterans in my study who used denial in the initial stages to avoid being confronted with the trauma they had experienced, because they were frightened to look at their injuries. In a study of 300 amputations, Bradway et al (1984) discovered that patients often deny their injury by showing physical prowess, such as wheelchair racing in the hallways. More recently, Messinger, Bozorghadad and Pasquina (2018) also recognise that competitive sport in rehabilitation is key to veterans pushing themselves to the maximum and accomplishing their goals. Similarly, Sandin (2010) emphasises the importance of engaging in exercise, as it can be a beneficial and protective factor

against stressors, such as anxiety, depression or hopelessness. This behaviour was also commonplace amongst veterans in my study, and it became clear that competing with each other was important as it resembled some level of return to normality, and was not acted out as a form of denial. Nonetheless, denial was only employed by veterans as a short-term strategy which Kubler-Ross (1987) indicated is healthy as it shows an adaptive state where the individual has reached a stage of peace and resignation to the inevitable. Moreover, Prigerson and Maciejewski (2008) would define this position as acceptance which represents emotional equanimity whereby there is tranquillity that allows a person to let go of a struggle to regain what is lost or being taken away. However, Thompson and Fisher, (2010) disagree and explain that if veterans do not recover from their psychological wounds, they experience acceptance with resignation, which may make them feel abnormal and suffer with depression. In the context of veterans this meant that they understood from quite an early stage in their recovery that their limbs were not going to 'grow' back and that they needed to move forward. This does not negate the fact that the situation was extremely upsetting for them, but veterans tended to posit a realist outlook. Nonetheless, those with psychological issues could not start to accept their situation until they had received psychological support.

Paterson (2001) argues that acceptance and denial as they are traditionally used by healthcare professionals have little or no relevance for those with chronic illness, however in the context of combat-related limb-loss these concepts are seen clearly in the behaviour of veterans. Specifically, they self-categorised themselves through talking about need to get over the denial and learn to accept their new bodies.

Kubler-Ross (1969:50) describes the pent-up anger that occurs when an individual's life-plans become eroded and asks the question: "What else would we do with our anger, but let it out on the people who are most likely to enjoy all these things?. This has some relevance to veteran amputees when their dreams and aspirations are shattered, directing their anger towards their families occurred. However, what is more noticeable was their anger towards themselves for becoming injured, leaving their comrades behind, experiencing obstacles to their recovery, and having psychological difficulties. It was these pent-up frustrations that often led to self-criticality and they aimed their anger upon those closest to them, whether that be family or healthcare professionals. Livneh et al (2000) discovered that greater active problem-solving was negatively associated with internalised anger, and consistent with my findings, they found that venting emotions as an outlet was part of the process of coping with the loss of limbs.

In relation to chronic illness, Paterson (2001) carried out a metasynthesis that challenged the single, linear trajectory of living with a chronic illness, and developed the 'Shifting Perspectives Model' which described an ongoing and shifting process. Telford, Kralik and Koch (2006) advocate the 'Shifting Perspectives Model' (which can incorporate limb-loss), as oppose to phase models (e.g. Kubler-Ross, 1969). A 'perspective' includes a person's beliefs, perceptions, expectations, attitudes, needs and experiences. Paterson (2001:23) adds that the shifting perspective model shows how people experience a complex dialectic between themselves and their world, which shows the shows the "ever-changing perspectives about the disease that enable people to make sense of their experience". In particular, these perspectives represent

illness in the foreground or wellness in the foreground, with the latter focusing on things can be done, and not what controls the person. This has great relevance to veteran amputees who sought to rehabilitate themselves despite their limb-loss, and refused to allow their loss to define them as people. They sought to do the best that they could with the internal and external resources available, whereby they 'bounced back' from their injuries with hope and optimism (Cater, 2012; Dewar and Morse, 1995). This occurs when veterans have to undergo countless surgeries and delayed healing in hospital, which tested both their physical and mental health. However, the ethos of the armed forces is to adapt and overcome and this is engrained within veterans, and was an important part of their recovery. Therefore, the shifting perspectives model can be related to most veterans, as it is clear that they demonstrated a continued perspective of wellness in the foreground despite adversity. Conversely, there were some veterans that suffered with post-traumatic symptoms and experienced denial, and had difficulties with acceptance, and tended to have a pessimistic outlook. When relating Freud (1961) and Kubler-Ross (1969) to these findings, they believed that denial was functional, but if it was prolonged it would lead to pathology. In some cases, veterans were living with illness in the foreground, which continued until they recognised that they were having problems with their mental wellbeing and sought help. In doing so, this proved to be a turning point for veterans who often struggled to progress in their rehabilitation, but the act of recognising themselves that they needed help was a critical juncture in their recovery. Furthermore, Telford, Kralik and Koch (2006) advise about the negative connotations that may come to the forefront of people's minds when they hear the word 'denial', such as non-compliance and poor rehabilitative outcomes. At times, veterans who

were in denial did experience these negative connotations, but ultimately, as Kralik (2002) explains, a person has to come to terms with the reality of a changed life, in order to move forward, and for some veterans this meant they needed psychological treatment. It was important for a veteran to recognise that they were having issues with acceptance, but often there was a noticeable delay in their recovery before they realised that they were struggling. Murray and Fox (2002) acknowledge that individuals face major physical, social and emotional adjustments, and that adaptation varies widely. Link and Palinkas (2013) add that whilst many veterans seem to make successful adjustments, there is a minority that develop psychological difficulties. Furthermore, Price and Fisher (2007) place emphasis on the unpleasant psychological consequences that occur post-amputation and found that individuals who lose limbs as a result of trauma, experience greater emotional distress compared to those who lose limbs from long-term conditions. Talbot, Brede and Metter (2017) add that more research needs to investigate veterans' perceptions of their mental health, as Desmond and MacLachlan (2005) explain that the stressors involved in limb-loss can challenge the person's emotional well-being, which can lead to the adoption of maladaptive reactions, that may lead to poor psychosocial adjustment. My findings support the literature where veterans would react to their situation by displaying a lot of anger towards their prosthetics (throwing them in rehabilitation) and their families, and initially did not recognise that they were having difficulties accepting the changes in their lives. Ultimately, Horgan and MacLachlan (2004) indicate that acceptance of a changed body over time, an optimistic personality disposition, greater satisfaction with prosthetics, higher levels of active coping and decreased pain levels all contribute to better mental health outcomes. Similarly, Livneh, Antonak and Gerhardt (2000) add

that coping strategies such as: having a confrontational attitude, rather than a passive and maladaptive one, and being optimistic instead of pessimistic all promote the acceptance of limb-loss. In my theory, 'time' was a crucial factor in acceptance for those veterans experiencing psychological difficulties and their natural tendency to be optimistic was clouded by trauma and their dissatisfaction with their prosthetics, coupled with their inability to cope and accept their changed life. Specifically, the anger and frustration evoked by these veterans seemed to be a way of venting their emotions in response to their circumstances. Veterans who did not voice psychological difficulties, were able to use their optimistic attitude to help them come to terms with their limb-loss and push forward in their rehabilitation. Their in-built ability to be resilient was an important factor when faced with adversity.

Telford, Kralik and Koch (2006) also argue that when an individual's experience of adjusting to a disability is interpreted as being in denial, this may be damaging to the self. Specifically, they suggest that when healthcare professionals look for cues to understanding a person's condition, the strict use of grief and psychoanalytic theories can hinder people's individualistic experiences of loss and trauma. Therefore, labelling someone as being in 'denial' may have negative consequences on a person's self-identity. When relating these perspectives to veterans, it was more the case that they themselves recognised their self-destructive behaviours and difficulties in rehabilitation, rather than healthcare professionals, comrades or family. This seemed to be significant for those experiencing issues with denial and acceptance where veterans needed to recognise that they were having problems and willingly seek help. Therefore, the denial-acceptance model seemed to be used by veterans in a positive

way and empowered them in their own recovery. Carver, Scheier and Weintraub (1989:270) explain that acceptance is the opposite of denial and is a functional coping response. Specifically, they postulate that “a person who accepts the reality of a stressful situation would seem to be a person who is engaged in the attempt to the deal with the situation”. All veterans sought to actively cope, even those that experienced psychological difficulties, it just took longer for them to realise that their behaviour was impeding their recovery.

Murray (2004) corroborates my findings that using prosthetics was an ongoing activity, and any issues became more manageable as time progressed and the prosthetic felt more natural. Nonetheless, Fitzpatrick and Pasquina (2010) indicate that an increased residual limb length post-amputation provides greater cosmesis and acceptance. Aside from post-traumatic symptoms, acceptance of the length of the amputated limb left in place is a crucial factor as veterans that were left with short stumps found that they had ill-fitting prosthetics which they felt hampered their rehabilitation. This is an important finding as having difficulties with prosthetics contributed to veterans having psychological issues, resulting in a stunt to their rehabilitation. Murray (2004) also found that the rejection of the prosthetic limb can occur if the individual could not get over the problems and adjust to wearing the prosthesis. Furthermore, Ham and Cotton (1991) discovered that fewer emotional problems, and better social integration were associated with well-fitting prosthetics. Specifically, veterans needed their prosthetics in order to regain an active life and it was critical to their sense of freedom (Norlyk, Martinsen and Kjaer-Petersen, 2013). Also, Horgan and Maclachlan (2004) indicate in a review of lower-limb amputation that a greater satisfaction with the prosthetic led to a

positive adjustment to limb-loss, and Davidson et al (2010) and Remes et al (2010) found that restricted mobility is related to a low quality of life. Veterans' experiences in my study are consistent with the findings from with these studies and emphasise the importance of regaining mobility and having prosthetics that meet their needs, otherwise it is detrimental to their wellbeing. Moreover, Murray (2005) makes the important point that prosthetics are fundamental in allowing amputees to return to social activities, which became paramount for veterans that wished to pursue old hobbies, such as running or kayaking. This meant that veterans needed specific prosthetics made for a particular pursuit, and if they did not receive these this restricted them from enjoying life. Specifically, those veterans that had complications with the fitting of their prosthetics inevitably experience social isolation, as they witnessed their comrades successfully moving through their rehabilitation with their prosthetics whilst they were hampered with immobility. Therefore, in my study the shorter the stump became the more difficulties veterans encountered physically and mentally, and as a consequence this challenged their ability to cope and accept their situation.

The level of limb-loss was a crucial, but complex factor in the acceptance process. For instance, the emerging theory demonstrated that those veterans with below knee amputation(s) found their rehabilitation less arduous due to keeping their knee joint intact (Stewart, 2008), which made their prosthetic fitting and mobilisation easier compared to those with a higher degree of limb-loss. These veterans voiced that coming to terms with their injuries was less complicated in comparison to others, and noted that the injuries to their limb(s) were nothing more than a 'twisted sock' (a

humorous military term used to mean that below-knee amputations were minor compared to higher degree limb-loss). Interestingly, Epstein, Heinemann and McFarland (2010) noted that the quality of life of veterans was reported to be better in those with multiple limb-loss when compared to those with unilateral limb-loss. Although Epstein and colleagues surmised that limb-loss may not result in poor functioning, my study found that the vast majority of veterans with higher degrees of limb-loss clearly expressed greater difficulties in their lives compared to those with unilateral limb-loss. For instance, Hagberg, Berlin and Renstrom (1992) determined that prosthesis use reduced as the level of amputation increased, which also occurred in a small amount of the veterans in my study. In particular, those with significant upper limb and above knee limb-loss preferred to make use of an adapted wheelchair rather than accepting prosthetics, as they voiced that the prosthetics caused too much discomfort, and they felt that they had a better quality of life with a wheelchair. This reiterates that functional use of prostheses and perceived benefits are vital to veterans' decision making as to whether they accept or decline prescribed devices (Karmarkar et al, 2009). Moreover, my developing theory clearly identified that dissatisfaction was the main reason veterans did not wear their prostheses. It is also the case that that above knee prosthesis requires a significant amount more energy to operate than a below-knee (BK) prosthesis (Chin et al, 2006; Hagberg, Berlin and Renstrom, 1992) because with a BK prosthesis, the veteran's knee joint is kept intact, therefore, other means of ambulation are sometimes more acceptable to an individual than prosthetics. It is also the case that the rehabilitation rate is higher with BK amputees than AK (above knee) amputees (Aulivola et al, 2004). In my study, veterans (particularly those with a higher degree of limb-loss) voiced that they anticipated that

they would be in a wheelchair when they were older as they did not perceive that they would have the strength to use prosthetics, so they felt that getting used to a wheelchair would be in their best interests. However, the opposite was also apparent when veterans refused to be wheelchair dependant and sought to avoid using a wheelchair. It seemed that these veterans viewed a wheelchair as unacceptable and symbolised giving up. Nonetheless, some veterans used both prosthetics and an adaptable wheelchair, whereby they used each of them depending on what activity was required i.e. if the task involved long distance travelling, they often used their wheelchair as they knew it required significant energy, whereas going to the convenience store or attending a party they would wear their prosthetics. However, a factor that did affect veterans use of prosthetics related to pain when wearing them, which in some cases resulted in them using a wheelchair to mobilise, and they had to come to terms with this situation. All veterans in my study who used a wheelchair came to find that it was not restrictive and that they could modify their wheelchair to suit their lifestyle.

How a veteran comes to terms with their injuries is multifaceted, and is not solely to do with their level of limb-loss. In my study a vital aspect towards acceptance was having a strong social support network that included both family and comrades. With regards to comrades, Sperber Richie et al (2002) investigated landmine survivors and the impact of family and community on their recovery. They found that interaction with other survivors provided a peer support network that enabled them to persevere despite their injuries. Furthermore, Hawkins et al (2016) discovered better outcomes (improved function and quality of life) in those individuals with greater social

integration and systemic social support. Other papers have also shown how poor social support can lead to increased difficulty in adjustment (Larson and Norman, 2014; MacLean et al, 2014). In my emerging theory, it became very clear that veterans needed to be around each other to help one another move forward in their rehabilitation and empowered each other to persevere and believe in their capabilities. Also, it became a recurrent theme that veterans indicated that a major part of adapting to their limb-loss was having comrades (also called brothers in arms) nearby, and explained that no one could understand their injuries or how they felt except another veteran. Several veterans would refer to their experiences of being a soldier and part of a unit, and how the social ties in rehabilitation contributed to them being able to overcome their mental crisis. One veteran's description encapsulated many veterans' experiences when he said: "You go to Afghan, he was there. You eat dinner, he was there. You go to the shower, he was there. He was always there". Losing that bond when they sustained their injuries was often described as being worse than losing their limbs, and in some cases the situation was compounded by the death of a comrade who did not survive their injuries. By reconnecting with a group of comrades in rehabilitation after a long period of wound healing, they regained some normality and they helped each other to accept their losses. I anticipated that mutual support may be a factor through my experience of having a father in the armed forces, but throughout the study veterans told me that having comrades in rehabilitation was a 'necessity' in their recovery, and they were emphatic about this aspect of rehabilitation. My findings support the work of Messinger, Bozorghdad and Pasquina (2018) who explain that whilst prosthetics are an important part of successful

recovery, the social dimensions of rehabilitation play an even greater role in how veterans evaluate their own recovery.

Moreover, the military culture as a whole was seen to be a crucial part of their recovery, and in order to gain an understanding of this concept an outsider needs to understand what the culture of the military entails. Specifically, Rybarzak, Syzmanski and Nicolas (2002) explain that basic training aims to convert civilians into soldiers committed to mission focus and team effort. My findings confirmed that veterans needed a mission in rehabilitation and that was to get up and use their prosthetics, and the team incorporated themselves, their families, their comrades and healthcare professionals. Several studies support my findings of the positive impact that a good family support network can have in accepting and adapting to limb-loss (Khademi, Gareab, and Rashdi; 2011; Hawamdeh, Othman, Ibrahim, 2008; Engstrom and Van de Ven, 1999).

Veterans in my study needed to set goals as this was also a return to some level of normality for them, but this became problematic when they could not move into rehabilitation due to their wounds failing to heal. Once they did finally move into rehabilitation, they experienced more hurdles along the way, however what veterans told me was that they used their military training to overcome adversity. Cater (2012) supports this view and explains that soldiers are trained to refuse to quit or accept defeat, and demonstrate the values of physical and mental toughness. Ferguson, Sperber Richie and Gomez (2004) indicate that the acceptance and recovery of limb loss survivors are greatly influenced by the resilience characteristics of the individual

(alongside social support, healthcare, economic situation and social attitudes towards amputees). Furthermore, constant encouragement from comrades and healthcare professionals helps veterans reach the limits of their capabilities, and it is their accomplishments that give them strength to continue meeting their personal goals (Messinger, Bozorghadad and Pasquina, 2018). Nonetheless, Sperber Richie et al (2003) add that psychological factors do impact heavily on recovery, and have important implications for acceptance or non-acceptance of the injuries. However, Thompson and Fisher (2010) add that when veterans recover psychologically and realise their situation could have been much worse, they are considered to be on the path toward acceptance with resilience. In recovery, veterans tuned in to their ability to be resilient and drew strength from their support systems, and they willingly accepted the challenges they faced. In particular, a study by Livneh, Antonak and Gerhardt (1999) discovered that problem-solving activity was positively associated with coping with acceptance of disability. Furthermore, Carver, Scheier and Weintraub (1989) proposed that individuals do not approach a coping encounter anew, but instead utilise a preferred set of coping strategies that “remains relatively fixed across time and circumstances” (p.270). This literature supports my findings that individuals can possess coping styles or dispositions, which in the context of veterans would explain how vital their military training was, and how it was engrained in their behaviour when they were confronted with limb-loss. When I as a researcher began to understand how rehabilitation and recovery was set-up, it became very clear that veterans in my study needed a military/sport environment in order to function and to heal. Specifically, this meant that the ethos of rehabilitation was to get veterans to their optimal level of physical functioning, and advocated a culture of sport and

competitiveness, which mimicked military life. The wider literature surrounded the incorporation of sport in rehabilitation for amputees agree with my findings that physical emphasis and sport-oriented activity is extremely beneficial to veterans' confidence, self-esteem and quality of life (Messinger, Bozorghdad and Pasquina, 2018; Furtado et al, 2015; Brugaru, et al, 2011).

Another factor of importance relates to a person's body image and acceptance of prosthetics when they experience limb-loss. For most veterans in my study, accepting prosthetics was relatively quick as they were key to restoring their feeling of 'wholeness'. Similarly, Cater (2012) and Riviera and Pasquina (2016) explain that reintegration can be negatively affected by a veteran's perception of themselves as a person following limb-loss. Saradijan, Thompson and Datta (2008) found a similar finding in men who wore a prosthetic arm as they felt it helped regain their body image. However, the degree of satisfaction of prostheses in veterans proved to be critical in regaining a sense of normality, however, there were some veterans who experienced difficulties with the fitting of their prostheses, which had a negative impact on their self-esteem and resultant acceptance of their situation. It is important to add when veterans lose limb(s) they faced a total loss of functionality which means they also lost the ability to 'work', which had a negative effect on their self-concept (Horgan and MacLachlan, 2004). Therefore, these veterans often felt idle and unable to maintain a positive disposition which led to a loss of motivation and hope that their situation would improve.

Some veterans believed they would not be able to fully accept their changed life during rehabilitation as in some ways losing an arm was seen to be more difficult due to the fine motor control a prosthetic arm/hand required. Not being able to button-up a veteran's own shirt or cut up their own food had a damaging effect on their self-esteem. Nonetheless, Smurr et al (2008) explain that most unilateral amputees can function independently with a single hand, but with the correct prosthetic training their functional performance can be improved, but having an artificial hand for aesthetic purposes was significant when they were out in public.

Sansoni et al (2015) explains that the aesthetics of prosthetics does have an impact on a person's wellbeing by improving their self-image, and this was also the case for some veterans with upper-limb prostheses. For example, a veteran with black skin documented how he could not get hold of a hand prosthesis that matched his skin, which made him feel very self-conscious and uncomfortable when he was out in public. It was important to him that there was a prosthetic in place and that it looked as realistic as possible. Conversely, other veterans solely sought functionality and were not discouraged by the physical appearance of their prosthetics. Despite this, some found their prosthetics clumsy and/or uncomfortable and they relied on healthcare professionals to resolve issues with their stump/prosthetics. This was imperative in order for veterans to be able to safely use their prosthetics and accept them into their lives. Although some did not find the prosthetic as useful as they had hoped for, they still used the prosthetic in some situations, and having the hand in place gave them increased confidence. However, other veterans had more success with their upper prosthesis and these proved to be a necessity in order for them to be as independent as

possible. In my study, all veterans were fitted with their prostheses and the time it took depended on the individual's personal, contextual and technological needs. Much of the research has tended to focus on rejection rates in civilian amputees where there is no consensus (Resnik et al, 2012; Ostlie et al, 2011; Datta and Ibbotson, 1991). However, a study by Berke et al (2010) discovered that veterans from the Iraq and Afghanistan conflicts were more satisfied with their prosthetic care than veterans from the Vietnam conflict (both upper and lower-limb veteran amputees). Other studies in a military context have demonstrated similar results in relation to satisfaction and rejection rates (Gailey et al, 2010; McFarland et al, 2010). The authors suggest that these findings are likely due to the improvements in initial battlefield medicine and rehabilitation, advancements in prosthetics and expansion of the multi-disciplinary team since the Vietnam conflict.

Some individuals cease the use of their prostheses due to factors such as lifestyle, pain, weight and personal preference (McFarland et al, 2010; Biddiss and Chau, 2007). Also, Dillingham et al (2001) examined the use and satisfaction of prosthetic devices in individuals with trauma-related limb-loss, and discovered that 95% used their prosthetics, but only 43% were satisfied with the comfort of their prosthesis. By the end of veterans' rehabilitation, the vast majority in my study accepted their prostheses, however, others could not tolerate the pain that they caused, and chose to solely use a wheelchair. Interestingly, some used both a wheelchair and their prosthetics (mainly those with above-knee limb-loss) depending on how they felt on a daily basis, as using an above-knee prosthetic requires 80% more energy than a non-amputee, because of the intricacies of normal knee movement (Adwan et al, 2016).

Nonetheless, veterans tried their hardest to wear their prosthetics at events relating to the military as this was especially important to them. Furthermore, a military study by Ladlow et al (2015) supports some of the aforementioned research findings in relation to the majority of veterans leaving rehabilitation wearing their prosthetics, and those needing a wheelchair did so for medical reasons or individual preference. Also, Ostlie et al (2011) concluded that it is vital to match the prosthetic to the needs of the individual and my findings corroborate this recommendation.

Once veterans in my research became lucid and aware of their loss, the vast majority did maintain a positive outlook, but only after they sought information about the welfare of their comrades. Although historical, Randall, Ewalt and Blair (1945) discovered in their study of 100 amputees that a person's reaction immediately after amputation is decided by the circumstances surrounding the loss. Specifically, veterans found that those who sustained their injuries in battle where loss of life was likely, had a more optimistic future outlook, compared to others who sustained their loss in other ways, and where loss of life was not a significant risk. Also, the importance of veterans having strong support network when they become aware of their loss was paramount, otherwise there was a risk that their positivity would be challenged. Furthermore, the literature demonstrates the psychosocial challenges a person experiences following limb-loss (Horgan and Maclachlan, 2004; Donovan-Hall, Yardley and Watts, 2002) which include body image anxiety and depression (Cairns et al, 2014; Ladlow et al, 2014; Phelps et al, 2008) and a lower quality of life than controls in the first three years post-amputation (Remes et al, 2010). In my sample of veterans, it was evident that there were episodes of low mood, such as when they first saw their bodies in the

mirror for the first time, or when they experienced an inability to progress in their rehabilitation. At these times, veterans talked about how this made them cry and the support from family, comrades and healthcare professionals were pivotal in order for a veteran to cope with their situation. Freysteinson et al (2017) focused specifically on amputees viewing themselves in a mirror and note that the Amputee Body Image Scale (as put forward by Gallagher et al, 2007) may not sufficiently capture body image disturbances in some individuals with limb-loss. Therefore, Freysteinson et al set out to generate a description of the mirror experience following limb-loss and the trajectory of the experience over time since the amputation. In their findings, they discovered that what one sees in the mirror may range from devastation to acceptance, however, at some point in time one begins to recognise the person in the mirror as self. In the case of veterans and how they experienced themselves in a mirror, there was a dichotomy in relation to whether a veteran had some level of choice in the amputation of their limb(s) and also the degree of limb-loss sustained. For those without a choice (limb-loss caused by trauma/to preserve life), and had a higher level of limb-loss, looking at themselves in the mirror for the first-time invoked feelings of disgust, upset and made them feel like half a person, which became very clear to them in rehabilitation when they were wearing 'stubbies' (foreshortened prostheses used in the initial stages of mobilisation) in place. However, those that could have an active role in the decision to amputate, which in my study consisted mainly of single-limb injuries, they often viewed the mirror as a more empowering experience. Nonetheless, in both instances, getting their actual prosthetics fully fitted and starting to mobilise was a crucial stage in enhancing how veterans felt about their bodies i.e. they felt more complete or made them feel whole again. Other research in a civilian

context supports the positive impact of prosthetics, in particular, Manabe et al (2019) carried out a review of the perceptions of self with visible artificial devices (prosthetics) and discovered that individuals experienced prosthesis integration into the self/body schema. Similarly, Christensen et al (2016) carried out a systematic review of the physical and social factors determining quality of life for veterans and discovered that physical activity, prosthetics and sports participation were found to be determining factors for HRQoL (health related quality of life). It was clear in my sample that activity restriction had a negative impact on veterans' wellbeing and it must be remembered that these veterans are generally young and fit and have a strong desire to be mobile. Therefore, by having the tools they need i.e. fully fitted prosthetics and rehabilitation, and by using their military mindset, veterans felt they could achieve their goals and be a functioning human again. These elements were crucial in order for veterans to be able to accept their limb-loss.

My emerging theory demonstrated that veterans who were experiencing psychological problems often ruminated about their limb-loss and all the things they would no longer be able to do, which hindered their progress and had a negative effect on their recovery. Moreover, McKechnie and John (2014) add that difficulty in overcoming the impediment can contribute to the formation of depression which seemed to be evident in my findings. The veterans in my study were often low in mood, had a pessimistic outlook and experienced difficulties in their rehabilitation. Although Parkes and Napier's (1975) work was published some time ago, their findings are consistent with the behaviour expressed by some veterans in my research that experienced difficulties in their rehabilitation. Parkes and Napier explain that an aspect to the loss

of limbs is the process of 'pining', where an amputee is said to pine for those aspects of life that have been lost. More recently, Baby, Chaudhury and Walia (2018) add that an amputee grieves for the loss and their old body image that mimics the grieving process i.e. denial, anger, bargaining, depression and acceptance, which is similar to the loss of a loved one, or when diagnosed with a life-threatening illness. This was clearly apparent in my findings where veterans being able to accept their injuries was delayed. Specifically, there was a reluctance to accept that their lives were changed forever, that they would have to come to terms with their losses and its impact on their psychosocial wellbeing, and face challenges with their rehabilitation i.e. learning to walk again and use prosthetics. Hamill, Carson and Dorahy's (2010) findings resonate with my developing theory in that an amputee will need to transition to a new identity, but that there will often be an initial resistance.

In the hospital stage of veterans' recovery, they undergo numerous limb revisions in order to remove foreign bodies, rid infection, and save as much of the limb(s) as surgically possible. In the postsurgical stage, which can last weeks to several months, veterans face their losses, but they are physically and mentally challenged. Desmond (2007) explains that maladaptive reactions that lead to poor psychosocial adjustment to being an amputee may be partly dependent on the coping strategies that amputees adopt to deal with their experiences of loss. She adds that problem solving and perceiving control over the disability do promote positive psychosocial adjustment, whereas emotion-focused strategies such as cognitive disengagement and avoidance have been linked with poor adjustment (Desmond and MacLachlan, 2006; Hill, Niven and Knussen, 1995). There are contextual differences to be taken into account

between these findings and my study population, that being the nature of the loss (traumatic versus acquired) and whether the injury occurs in a civilian or military context.

An important part of all veterans' rehabilitation was the ongoing process of comparing themselves to others. Research carried out by Festinger (1954) and Willis (1981) explain that in social comparison theory, people make upward (comparing themselves to people who are better off) and downward social comparisons (comparing themselves to people worse off). Veterans used both upward and downward comparisons during their recovery, with the former being used as a strategy to motivate themselves and set goals, and the latter being a realisation that their situation was in fact more fortunate than some others. These behaviours are an important part of veterans coming to terms with their limb-loss and accepting their changed life.

However, a veteran's recovery can be made more arduous when they cannot make any comparison to others, which is particularly apparent when the level of limb-loss a veteran sustains is more severe than others. Therefore, as they cannot make comparisons, they rely heavily on healthcare professionals to provide an insight into their future capabilities and motivate them throughout their rehabilitation. The social comparisons identified in my study have also been noted in nursing literature around burnout (Buunk et al, 2006) and other limb-loss studies in a civilian context (Uytman, 2014; Hamill, Carson and Dorahy, 2010). This clearly demonstrates the importance of rehabilitation in a social context and it would be beneficial for healthcare professionals to be aware of social comparison theory.

Heavey (2013) explains that there has been a growing interest in the (re)definition of disability over the last fifty years. As a result, the medical model of disability is critiqued because as it places certain traits of an individual (including loss of a limb) as having restrictions on the person and, therefore, labels that individual as disabled. Officer and Groce (2009) argue that viewing disability through a medical lens means that disability is narrowly associated with an individual's impairment, health status or capacity limitation. Hogan (2019) writes about how disability scholars have fought to challenge the medical model in favour of a social model, where disability is not solely caused by an individual and medical problem. Instead, the social model of disability places emphasis on disability being located in society, rather than the individual, where social factors such as negative attitudes, barriers and cultural prejudices with regard to disabled people's bodies are the origin of disability (Yuill, Crinson and Duncan, 2010).

Specifically, in the United Kingdom, Heavey (2013) highlights that the medical model of disability on the NHS website states that amputees will be disabled by their limb loss, however, her study found that the majority of participants (civilian amputees) minimized their own level of disability. In my emerging theory, disability was never a word used by veterans, but they understood that their loss would place limitations on them for the rest of their lives. Interestingly, Kurzman (2003) also studied US amputees and discovered that they preferred to adopt the identity of impaired, but not disabled.

Veterans in my study tended to focus more on what they 'could do' rather than what they 'could not do', as a way of actively coping with, and accepting their loss. As an

example, some veterans said they may not have been able to run around the garden with their children, but they were able to be a loving parent, which demonstrated their awareness of their limitations, but that they would not define them as parents. Therefore, being able to contribute to family life was imperative as it gave them a sense of purpose, which contributed positively to the acceptance process.

Mitchell (2018) reports that most of the literature into limb-loss demonstrates amputees comparing themselves to others who may be worse off. Heavey (2013) supports this position and discusses the stratification of disability in the ability to do certain tasks, and documents participants in her study comparing themselves to others who were more disabled. Research also carried out by Festinger (1954) and Willis (1981) explain that these findings can be related to social comparison theory, where people make downward social comparisons (comparing themselves to people worse off) and also upward comparisons (comparing themselves to people who are better off). More recently, Murray and Forshaw (2013) carried out a metasynthesis that confirms the importance of social comparison, as it provided comfort to amputees. The literature surrounding limb loss has tended to focus on downward comparisons, but in my study, veterans made use of both types of comparisons, with the former being a realisation that their situation was in fact more fortunate than some other comrades (i.e. those with a higher degree of limb-loss or veterans who had lost their lives), and the latter being used as a strategy to motivate themselves, set goals, compete with other veterans, and achieve their full potential.

In my emerging theory, veterans also talked about showing gratitude towards members of the public who, for example, opened a door for them, but in reality, they would have preferred to do it themselves, as they did not wish to be viewed as needing help. However, veterans realised that the public's actions were inevitable and, although frustrating, they would do things such as run or propel themselves towards a door and open it for a member of the public, in order to demonstrate their capability. Similarly, Heavey (2013) also writes about individuals making the point that they are not helpless, often getting frustrated at other's well-meaning attempts to help them do things when they could do them alone.

Therefore, the social and social models would state that other's actions and reactions can be 'disabling', which is clearly seen in a study by Sperber Richie et al (2002) when a participant explained: "...I've felt rejected when some people say you're disabled-or look at you and you meet their gazes". Sperber et al concluded that a person's immediate societal environment influences their self-concept and psychological wellbeing. Research by Singh et al (2009) describes the anxiety that individuals can feel when they are discharged from rehabilitation, due to the worries about other people's reactions. As a result, Murray (2005) postulates that when an amputation is greatly visible, amputees can withdraw from social situations in order to manage their altered self-identity. Also, Richardson, Molyneaux and Murray (2019) add that stigma and negative reactions can affect people's quality of life. What became clear from veterans is that they had an awareness of how they could be treated by the public, but they were motivated to display confidence in themselves, to demonstrate their capabilities. They did not want people to view their prosthetics as restricting them, which

emphasised the importance of their prosthetics being well-fitting, as these were crucial enablers to veterans having an acceptable quality of life, and gave men and women the ability and confidence to be around other people. My findings contradict the work of Cater (2012) who carried out a phenomenological study of the psychosocial adaptation of six army women that lost one or more limbs. These women were greatly concerned about how others viewed them and were affected by public perception. Despite these different empirical discoveries, a similarity exists, in that these women used their military courage when meeting new people and being in public. This reinforces the mindset of military personnel and how they are able to use their resources to actively cope with situations that they experience. Similarly, Guilding (2017) also found in her study of veteran amputees that they held fears about how the others would view them. Her participants explained feeling like a leper and one participant described how he would cover his stumps with jeans when out in public. Nonetheless, a commonality exists between my findings and Guilding's in relation to veterans not wanting sympathy and just wanting to be independent. They wished to educate society and were happy to answer questions. Also, Murray (2009) contributes that appearing and living life as everyone else does and to be treated like everyone else was important to individuals. Similarly, veterans also wished to go about their daily lives amongst their communities without any issue.

Another crucial factor in acceptance relates to the medical discharge of veterans. In my study I discovered that veterans sometimes viewed their discharge as inevitable, but this did not negate the fact that the loss of their job impacted heavily on them. Again, several of these men and women had hopes of staying in the armed forces for

the foreseeable future and they had put so much time and effort into being a soldier. What seemed to be an important factor was coming to a decision for themselves which required time. Maclean et al (2014) found a significantly lower percentage of individuals who were released voluntarily (16.4%) experienced difficulties adjusting ($p<0.5$). Veterans in my study talked about how they came to the conclusion that they would not be able to return to their former role, and as that was the case, they chose to be medically discharged. Being able to participate in the decision-making process surrounding their medical discharge was important for their wellbeing.

Interestingly, an important finding from my study related to veterans' professional identity when they transition to civilian life. One could perceive that when veterans become medically discharged, they no longer view themselves as a soldier, however, my emerging theory found the exact opposite. The 'once a marine, always a marine' ideology helped veterans cope with the loss of their role in the military, but they still kept their professional identity when transitioning through engaging in activities, such as motivational speaking, working for charities and upholding the values of a soldier. From a personal perspective, even though I do not practise as a nurse clinically, I still regard myself as a nurse and uphold the values and expectations of the nursing profession. Therefore, veterans' military identity cannot be erased, it is engrained in them, and they seek to maintain their connection to a military identity despite being medically discharged.

5.4 Stage of finding meaning

Part three of this chapter relates to the third stage of the grounded theory of facing losses, that of finding meaning and will discuss in-depth its properties. I will detail how the concept of finding meaning has been studied within the existing literature in civilian and military contexts, and will then make comparisons to my findings, in order to nest my generated theory amongst the limb-loss literature. Finding meaning is a shorter theme with fewer properties. The vast majority of veterans were able to find meaning or purpose in their lives to help propel them forward in their recovery, however, for others this process was much more difficult and took more time.

Before I aim to achieve these steps in the discussion, I wanted to begin by sharing a memo I wrote in 2014 and rediscovered only a short time ago, that I believe is relevant to this study and finding meaning.

Memo: 23/08/2013- To be a soldier

During my practice in the district nursing service I developed my ability to communicate effectively with a diverse range of individuals through clinical experience and training. I believe that my ability to deal with sensitive situations which occur in end of life care and manage the complexities involved in those with chronic illnesses could help me to study veterans with limb-loss. However, I am going to be dealing with a group of men and women I don't really know anything about and I am asking them to take part in a study. Am I asking too much? Is it fair on them? Is it right to do this? I won't lie, I have been having second thoughts about doing the research. What can I do as a PhD student

to try and understand what it means 'to be' a soldier...I wonder how that could be achieved.

I have come back to this memo to report back. I asked a short time ago by telephone if I could visit Headley Court (Defence Medical Rehabilitation Centre) in the UK, where soldiers begin their recovery after receiving their hospital care. I had to do something to justify why I am entitled to study these men and women. I needed to prove to myself that I was motivated enough. I didn't know if I was going to share this next piece of personal information in the thesis or not, and I have decided that I should. I have bipolar disorder and when I was diagnosed it had broken me, turned me into a shadow of my former self, and I grieved for the person that I thought I used to be. I could carry on writing this memo for a very long time, but how this is all relevant to veterans is: I lost something important to me, something I won't get back, no matter how hard I try.....my mental health. I would never compare my situation to veterans but I felt the need to share it on paper. Anyway, I was fortunate to secure a place at a seminar at Headley Court where I was able to listen to various military professionals talk about soldiers and the holistic impact of combat-injury. Towards the end of the day I was able to visit the rehabilitation environment where a veteran spoke about his injuries and gave insight into his recovery. This exposure was extremely valuable to my research. I would not say that this experience has made me an expert in knowing what it is like 'to be' a soldier, but I have gained a glimmer of awareness.

When I look at this memo now in 2019, I don't think I would have been able to interview my first veteran due to my initial perceptions given in the original memo.

Headley Court gave me some insight into what it means to be injured from a theoretical standpoint. I needed that.

In 1962, Victor Frankl wrote in 'Man's Search for Meaning' that individuals have a psychological need to create or find a sense of meaning and purpose after suffering or loss. Finding meaning through believing that their loss had a purpose was very important to veterans in my study, in the sense that losing their limbs in a conflict reassured them that it was not in vain i.e. they lost their limbs fighting for their country. This finding is corroborated by Cater (2012) in a military study of limb-loss where the belief that their loss had a purpose facilitated the development of a new sense of self.

Frankl (2006) posits the idea that individuals may lessen their distress in severe circumstances by assimilating personal meaning through their attitudes, experiences and behaviours (Schulenberg et al, 2008). Furthermore, Gallagher and MacLachlan (2000) sought to investigate whether people think about their amputation and a finding demonstrated that some focused on the positive consequences of their amputation. Similarly, Dunn (1996) found that 77% of individuals considered that something good had come from their amputation. My theory supports these perspectives as the vast majority of veterans used their experiences and optimistic attitude to see the good that had come from their losses e.g. gaining a new partner, having opportunities as a veteran amputee that they would not have had before losing their limbs, and making new friends.

Reitinger (2015:162) writes about Franklian psychotherapy and explains that “even though we as human beings cannot often control the circumstances in our lives (fate), we can control our attitudes and responses to those circumstances”. My emerging theory corroborates this perspective as veterans emphasised that they had no choice over losing their limbs, but they could control their *reaction* to the situation. This seems to be a common military response as Cater (2012) also found that veterans in her study tended to focus on their abilities rather than on things they had no control over.

An important strategy in my emerging theory related to veterans using their spiritual or religious beliefs. For some veterans their faith in God enabled them to recover and they drew strength from their beliefs. Tuncay and Musabak (2015) confirm my findings in their study of Turkish military veterans with limb loss and found that the positive effects of coping strategies, such as religion enhanced posttraumatic growth (PTG). Furthermore, Reitinger (2015) argues that human beings are mainly characterised by being spiritual; as spiritual beings they are not determined but are able to act freely and responsibly, and to realise value and meaning. In my findings, some veterans’ faith in god already existed before they were injured so they were able to use their beliefs to ascertain meaning from their limb-loss early on in their recovery. This is not to say that it was easy process for these veterans, but I noticed that it was advantageous to have pre-existing spiritual beliefs. Other veterans found religion during their rehabilitation and it was a meaning-making activity where they searched to find a reason for their injuries. In some cases, acceptance took place for veterans who found meaning through god, which is supported in a study by Sperber Richie (2002) who also

discovered that surviving amputees' religious or spiritual beliefs contributed to finding meaning in the aftermath of the injury, which contributed to their acceptance of the injury and their recovery. Similarly, other studies have also demonstrated that spirituality or religion leads to positive coping (Ferguson, Sperber Richie and Gomez, 2004; Livneh et al, 2000; Dunn, 1996).

Gallagher and MacLachlan (2000) highlight that the literature has focused on the negative impact of limb-loss, however Dunn (1996) concluded that those individuals who were high in dispositional optimism would be more likely to search for positive meaning in their amputation. For veterans, getting back their physical function with prosthetics was critical and meant that they would be able to continue achieving meaningful goals, such as actively participating in family time and taking part in sports. Livneh, Antonak and Gerhardt (2000) found that finding a positive meaning in those with amputations was a coping strategy associated with better psychosocial adaptation, and Dunn (1994) posited that negative life events frequently cause those affected to search for positive meaning. However, this was not the case for veterans who experienced psychological difficulties affected by ill-fitting prosthetics, as they held a pessimistic attitude towards being able to walk again, and could not find any positive meaning from their situation. It was clear that these veterans had already experienced considerable losses that included their physical loss of limbs and the connection to their military way of life that it is not difficult to see how much further damage prosthetic difficulties was causing. Dunn (1996) found that finding meaning following amputation was linked to lower levels of depressive symptoms and Dunne et al (2015) discovered that an individual with depression voiced that seeing others

during rehabilitation had encouraged her to overcome her pessimistic thoughts to do with her functional abilities. However, veterans experiencing low mood saw their comrades progressing in their recovery, which did not inspire them, and only instilled more pessimism. They viewed the prosthetics as critical in helping them rebuild their lives but they seemed to experience countless problems. Similarly, Dunne et al (2015) found that amputees assigned meaning to their prosthetics that extended beyond physical functioning, and this is also the case in veterans where their prosthetics enabled to feel 'whole' again.

Psarra and Kleftaras (2013) report on similar losses to veterans in those with an acquired disability e.g. loss of pre-existent roles and independence, and explain that this can result in a psychosocial crisis. Furthermore, Emmons, Colby and Kaiser (1998) explain that traumatic events precipitate what they call a meaning crisis, raising questions about the purpose and meaning of life. Veterans in my study were often teetering on the edge of a crisis, and at times questioned "whether it was worth carrying on" or "why didn't that IED end me". They also couldn't understand why the prosthetics were not fitting and acceptance was part of the issue, which is discussed in the previous stage of the theory, but it was the totality of their life's circumstances as well. Psarra and Kleftaras (2013) posit that when individuals with physical disabilities possess the feeling of meaning in life, then they come to accept and cope better with their situation. In my emerging theory, the support of healthcare professionals had a positive influence on these veterans, and in some cases helped them to realise that acceptance may have been a problem for them. Chockalingam, Thomas and Duval (2012) explain that channelling the physical and psychological traits they possessed

before their loss into sport may be beneficial. My study corroborates this view and I cannot overemphasise enough how much of an impact sports (adaptive and general) had on all the veterans, but focusing on those with psychological difficulties, it was life-changing for them. They classed these opportunities as 'therapy' and they needed them to be a permanent part of their lives in order to stay well. Their mood lifted through their engagement in sport and they were now able to find positive meaning.

Gallup (2010) explains that those who have career wellbeing are more than twice as likely to be doing well in their lives overall. Also, Armstrong et al (2018) posit that positive employment may contribute to a sense of meaning and purpose in life. These findings support my emerging theory in the sense that a major part of getting prosthetics was to be active and productive. Although employment per se was often not possible because of their injuries, they still wanted careers and whatever they did had to hold meaning for them, such as working for wounded military charities and motivational speaking.

For veterans who were contemplating amputation the decision-making process was a meaning-making exercise as it allowed them to discover what it meant to be an amputee. They were also able to justify becoming an amputee and often had the mindset that now they had made that decision they had to make the most of what life had to offer. Through having had access to role models (those veterans further along in rehabilitation) and felt the benefit in their recovery, quite often they became a role model themselves for new veterans, and it was a cyclical process of support.

Veterans in my research tended to regard themselves as being 'better off' than before their injuries once they had found meaning or purpose in their lives, which is supported and perceived as a surprise finding in a study of veteran amputees (Jepsen, Wood and Holyoak, 2019). It was quite often the case that veterans were given opportunities they felt they would not have had in their life prior to injury, such as taking part in extreme sports. In doing these activities, they regained a sense of normality through the friendships they developed and camaraderie.

As described in the acceptance stage, veterans do make social comparisons in rehabilitation (Willis, 1981) and they also engage in making downward comparisons to give themselves meaning. For instance, several veterans talked about how they compared their injuries to those worse off and gave themselves a reality check i.e. they found meaning through recognising that their injuries could have been worse, and that they were fortunate to be alive.

In my study, a variable that became noteworthy were veterans' perceptions of the level of their limb-loss, as those that went through a below -knee (trans-tibial) amputation made it clear that their recovery was easy compared to those with a higher degree of limb-loss. As a result, their journey to getting back to physical activity and taking part in adaptive sports was considerably quicker, and they viewed their amputation in a positive way (especially those that chose to amputate their limbs). I remember asking these veterans how their loss had impacted on them, and quite often they responded that it had not, and they did not dwell on the limb-loss.

Gallagher and MacLachlan (2000) corroborate this finding and add that it may be more

straightforward for individuals to assimilate a trans-tibial prosthesis into their lives when it does not interfere as much as a bilateral amputation or a trans-femoral amputation. Therefore, there may be less necessity to think about the amputated limb.

5.5 Summary

Within this chapter I have integrated the extant literature with the three stages of the theory of 'facing losses' and their properties. The losses that veterans experience are not just physical, as they extend to the mental and social realms, too. Therefore, the findings of the study contribute a physical and psychosocial understanding of the impact of combat-related limb-loss where knowledge is currently sparse. A classical grounded theory (theoretical model) is offered to better understand the behaviours of veterans on the frontline, through their rehabilitation and at the point of medical discharge. Specifically, the theory introduces to the literature the novel concepts of dealing with uncertainty, acceptance and finding meaning around veterans' experiences of living with limb-loss. Also, through literature searching I discovered that there are a small number of PhD theses and published works around combat-related limb-loss, but they have focused on resilience and have not attempted to generate the beginnings of a theory. Therefore, my study offers a methodological contribution to combat-related limb-loss through its use of classic grounded theory.

CHAPTER SIX:

Recommendations Limitations, and Conclusion

6.1 Introduction

This final chapter begins by making recommendations for the future and for education and practice. Following this, the limitations of the study will be identified and then a brief researcher reflection is included that incorporates some of my thoughts about the research. Reference to the original research aim and objectives in relation to the research findings will be made before the drawing the conclusion.

6.2 Recommendations for future research

This research highlighted several areas for future research. Classic Grounded theory's main methodological contribution is that by analysing grounded data from participants and integrating this with extant theory new explanations for social phenomenon are discovered. I have generated the theory of facing losses that provides an explanation of the complex processes and behaviours involved in veterans with limb-loss, that help to deal with their physical, psychological and social losses. The theory relates to the battlefield, hospital and rehabilitation environments, and the point of medical discharge. It is clear that the theory of facing losses could be used for comparisons in other substantive areas, such as veterans' transition and adjustment to civilian life or those veterans diagnosed with post-traumatic stress disorder. It would also be interesting to use uncertainty, acceptance and finding meaning as sensitising concepts in civilian limb-loss e.g. traumatic, disease-related and congenital. These research

endeavours would begin to extend substantive theories towards formal theory through conceptual comparisons (Andrews, 2012).

Talbot, Brede and Metter (2017) identify the lack of physical and psychosocial research available in the rehabilitation period following amputation in veterans, and therefore, the theory of facing losses contributes new knowledge in understanding the impact of limb-loss on veterans during rehabilitation. Furthermore, my research has highlighted that there is a need for more theories in the context of combat-related limb-loss.

Another area for future research relates to veterans accessing psychological support. In some cases, they do have difficulty recognising and seeking help when experiencing psychological difficulties in rehabilitation. Therefore, increasing the research by exploring their beliefs and knowledge surrounding mental health, we can better understand how to provide psychological support.

Aspects of the findings have been disseminated on an international level, at the Royal College of Nursing international Conference in Belfast, Northern Ireland, in 2014. Also, I have presented the developing theory of facing losses at several Classic Grounded Theory seminars. I have engaged in many interesting talks with other researchers about the care of veterans and resilience has always emerged as a central theme. It would certainly be interesting to explore the concept of resilience in a civilian setting and compare the two contexts.

6.3 Recommendations for education

It is easy to assume that veterans have certain characteristics, such as being strong and courageous. The media coverage surrounding wounded veterans has tended to show veteran amputees accomplishing extraordinary goals e.g. climbing mountains and rowing across the Atlantic Ocean. Therefore, a high number of veterans could be considered as high functioning amputees (Uytman, 2014), but in reality, my theory demonstrates that there are some veterans that experience significant psychological problems. The loss of a limb can improve a veteran's quality of life when they have suffered with failed wound healing, but it can also be devastating for others. The study findings will be useful for undergraduate nursing education as the new Nursing and Midwifery Council's (NMC) education standards expect universities to ensure that students nurses "experience the range of practice expected of registered nurses to meet the holistic needs of people of all ages (NMC, 2018a:10). My research will help universities meet this standard by providing student nurses with an insight into the behaviours of veterans when they experience combat-related limb-loss, so that they will be able to take their journey into account when providing care. The study findings are also relevant to meeting the standards of proficiency for registered nurses in being able to "demonstrate and apply an understanding of what is important to people and to ensure their needs for safety, dignity privacy, comfort and sleep can be met" (NMC, 2018b:11). All of these factors are important and my research will contribute to increasing registered nurses' (and pre-registration nursing education despite it not being explicitly mentioned in the NMC standards), awareness of what matters to veteran amputees e.g. functionality, independence and having social ties to other

veterans. Also, the study's insights into the behaviours of veterans support a culture of education where being non-judgemental and avoiding stereotyping are valued. In the case of veterans, they do not wish to be perceived as weak and dependent or viewed as portrayed in movies and video games. They just wish to be treated like everyone else and be able to enjoy their lives.

Martin et al (2018) explain that often studies claiming to use grounded theory methodology do not follow the critical steps in the development of a theory e.g. saturation and theoretical sampling. This often adds to the confusion for researchers contemplating using a grounded theory approach in their work. The support from Prof Cathy Urquhart, Dr Barney Glaser, the grounded theory fellows and my supervisory team facilitated my development using a CGT approach, which was congruent with the aim and objectives of my research. Therefore, my study can be used by other nursing researchers to increase their knowledge of the workings of the CGT approach.

6.4 Recommendations for practice

The vast majority of veterans post-amputation are medically discharged after completing their rehabilitation (Ministry of Defence, 2015), which means their care transfers from the military to the National Health Service in the U.K and the Veterans Administration in the U.S. The majority of veterans are young and will require life-long care from these institutions. Therefore, the findings of this study will be useful to professionals who specialise in this care. By increasing their awareness of how veterans experience being a soldier and then deal with becoming an amputee will help healthcare professionals provide care for this group of people.

The findings of this study will be beneficial to the military as there is a dearth of research exploring the rehabilitation period for veterans. I will share my research with contacts that I have made in Headley Court (Defence Medical Rehabilitation Centre) and with officers I have communicated with in the armed forces during my study. I am also keeping abreast of opportunities to disseminate my findings at military research seminars and conferences.

Civilian amputee rehabilitation and recovery services would also benefit from the findings. In particular, the factors that enable veterans to recover e.g. amputee peer-support could also be beneficial to civilian adults experiencing traumatic, disease-related or congenital amputation.

6.5 Limitations

The small sample size of interviews may be viewed as a limitation, however, there is no consensus over the number of interviews required in qualitative research. Moreover, a CGT study places less emphasis on sample size and focuses more on theoretical saturation; that being the point where a researcher is finding no new codes in the data (Urquhart, 2013). Also, as is the case in most qualitative research, interviews were in-depth (the shortest being approximately 1.5 hours and the longest reaching 3.5 hours) and follow-up email conversations were carried out throughout the study.

A possible limitation of CGT methodology is that some of the data became redundant and was not used in the theory. This was because CGT focused on a main concern that emerged in veterans' lives i.e. dealing with their physical, mental and social losses, that

was being processed through a core category of facing losses. Therefore, any data that was not relevant to the emerging theory was not included in the study. Nevertheless, it is possible to build other grounded theories with the data that was left behind.

Interpretation of the data may be limited in qualitative research because a second researcher may not find the same concepts when analysing the data. However, my supervisor and I spent time coding the data independently and found several similar ideas and concepts. Also, it is important to note that CGT produces a theory; not the only theory for a substantive area.

6.6 Researcher reflections

I have disclosed my own battle with mental illness at certain points in the thesis in order to demonstrate to the reader that I do have some level of understanding of the losses that one can encounter living with a long-term condition. Although there are serious negative repercussions of having bipolar disorder, there are also positive traits that have been reported (Greenwood, 2020). In particular, Parker et al (2012) discovered that it can lead to individuals perceiving a greater sense of self awareness, which I experienced in my study. I was a PhD student coming to terms with my own losses and by using my own mental trauma i.e. my thoughts, feelings and reactions were a pathway to developing an empathetic stance when listening and talking to veterans about their trauma.

The art of interviewing is experiential and when combined with researching a sensitive substantive area such as limb-loss, this can be extremely challenging. Moreover,

Dickson-Swift et al (2009:61) have described qualitative research as “emotional labour”. In hindsight, I believe that I struggled with the tension between keeping a professional distance as a researcher when taking part in intense and highly emotive personal encounters with the veterans.

Although I was initially apprehensive about meeting the veterans my state of anxiety was greatly reduced as they welcomed me without any judgement. They were very interested in the study, asked me questions about the university and were eager to tell their stories to me. In fact, all the veterans were in no rush to get the interview completed and I spent a considerable time with each of them. During face-to-face interviews veterans wanted to show me their prosthetics and how they worked. I learnt through this process that I did have the strength, ability and rationale to do the research, which was good for my own self-esteem and confidence.

I am passionate about sharing the research findings and I have been asked by military charities to give a presentation to their veterans and staff. There is an ethical obligation to try and disseminate research which has recently gained traction in the health sciences (Mootz et al, 2019; Pearn, 1995) and I believe that I have a duty to the veterans that took part in my study, to continue raising awareness of combat-related limb-loss. I have identified several conferences such as the Veteran’s Mental Health Conference (theme- Bridging the gap) and the American Congress of Rehabilitation Medicine Conference (theme- Progress in rehabilitation research), in 2020 that I would like to attend. I am also continuously thinking about publishing more papers from the

thesis and deciding which journals would be appropriate e.g. Journal of the Royal Army Medical Corps and the Veterans Disability and Rehabilitation Research Channel.

It was abundantly clear that partners and family members play a pivotal supporting role for veterans in their recovery. In order for partners and family members to keep supporting veterans, we also need to care for them, too, as it can be the case that when a veteran becomes injured all the attention is inadvertently placed on them and their recovery. A recent study by Engward, Fleuty and Fossey (2018) explored the family perspective on living with limb-loss using grounded theory, however their exclusion criteria were those veterans from the Iraq and Afghanistan conflicts. This indicates a need for more research exploring the impact of combat-related limb-loss on veterans' families. There are charities that support families, but empirical studies are also needed to find out their perspectives and contribute knowledge to the existing literature. In doing so, this will raise awareness of the role that families play in the long-term recovery of veteran amputees and will help to identify areas where support is needed.

6.7 Conclusion

My study demonstrates how CGT has the capability to produce insightful research in a substantive area with little known knowledge. Most of the empirical research investigating limb-loss in veterans has focused on the physical aspects or outcomes using quantitative methods. My study has explored the impact of combat-related limb-loss in veterans from the Iraq and Afghanistan conflicts and has generated a theory of facing losses that contributes a physical and psychosocial understanding of veterans'

limb-loss. Specifically, this theory of facing losses depicts *how* veterans deal with their physical, mental and social losses through facing uncertainty, acceptance and finding meaning.

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Appendices

Appendix One: Participant information Sheet



Participant Information Sheet

Research Title: An exploration of veteran's experiences of combat-related limb amputation and life after injury

Dear

I would like to invite you to take part in my PhD research study. Before you decide I would like to explain to you what the research is about and what it would involve for you.

Purpose of the study-

This study is being carried out to develop a greater understanding of veteran's experiences of combat-related amputation and life after injury. I would like to understand how it has affected you personally which I hope will help us to have a better insight into the challenges you face and also help raise awareness of life after injury. This study is being funded by Manchester Metropolitan University and has been granted ethical approval from the University research ethics committee.

Taking part-

It is entirely up to you to decide whether you wish to take part. If you do want to take part, you will be given this information sheet to keep and you will be requested to fill in a consent form on the day we meet.

What are the benefits of taking part?

There are no direct benefits to you personally but your contribution will be invaluable in increasing the research knowledge base around the experiences of combat-related amputation and life after injury.

What will be done?

I am asking you to consider taking part in a face-to-face chat that I anticipate will take no longer than 90 minutes. Your story will be audio-recorded to ensure it is accurate, and it will be carried out at a time and place that is convenient to you. Again, if you decide you want to take part after reading this information sheet then you will be asked to complete a consent form on the day we meet, so that I know you fully understand what is being requested of you. Only you can make this decision and it is completely voluntary.

Risks or discomforts-

I am mindful that some people may find it upsetting during the discussion so I want to make it clear that it can be stopped at any point, and you can withdraw from the study at any time. Also, if there are any areas that arise during the discussion that you do not wish to talk about, these will not be pursued.

Confidentiality-

I want to make it clear that anything you tell me will be kept confidential in the research team. Your story can be kept anonymous or you can choose to be credited with it under your full name or a name of your choice. This will be discussed with you when completing the consent form on the day we meet, and if you change your mind in the future you can contact me. Your personal information will be handled in accordance with the Data Protection Act 1998 at all times.

Withdrawing from the study-

Your participation is voluntary and you can withdraw at any time, without giving a reason.

How the findings will be used-

The findings from this study will only be used for academic purposes. This means that they may be used at professional conferences and publication in appropriate professional journals. However, I want to make it clear that if quotations are used from the story you provide, they will be anonymised unless you choose to have your story credited to you. By sharing the findings with others it will help create a better understanding of the impact of combat-related amputation and life after injury.

Keeping you updated-

A dedicated Twitter hashtag has been set up to provide updates on the research progress:

Twitter- @CombatAmpMMU

If you have any further questions about the study that have not been answered please get in touch with me.

Many thanks,

Mr Lee Yarwood-Ross RN (PhD researcher)
L.Yarwood-Ross@mmu.ac.uk
07545 885686

Appendix Two: Participant consent form



Participant Consent Form

Research Title: An exploration of veteran's experiences of combat-related limb amputation and life after injury

**Please
initial**

The nature, aims and risks of the research have been explained to me. I have read and have understood the participant information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

☐

I understand that my participation is voluntary and it will be possible for me to withdraw from this study at any time without giving a reason by notifying the researcher.

☐

I am aware that I can ask the researcher for more information about the study at any time.

☐

I am aware that I can choose to be credited with my story or remain anonymous, and know that I can change my mind at any time by notifying the researcher. I also understand that my personal information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.

☐

I am willing for direct quotations to be used in presentations and publication by the researcher on the understanding that they will be kept anonymous, unless I choose to be credited with my interview and indicate this decision to the researcher below. I also understand that I can change my mind at any time by notifying the researcher.

☐

I understand that my interview may be used in future research projects after gaining ethical and institutional approval.

☐

I agree to take part in the above study.

☐

Participant's Statement:

I _____

agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the study. I have read both the notes written above and the participant information sheet, and understand what the research study involves.

Signed:

Date:

I would like my interview to remain anonymous: **YES** **NO**

If you answered NO, what name would you like your interview to be credited under:

Investigator's Statement:

I _____

confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the Participant.

Signed:

Date:

AUTHORISING SIGNATURES

The information supplied above is to the best of my knowledge and belief accurate. I clearly understand my obligations and the rights of research participants, particularly concerning recruitment of participants and obtaining valid consent.

Signature of Chief Investigator

.....

Date:

Name and contact details of Chief Investigator:

Mr Lee Yarwood-Ross RN
PhD Researcher

Manchester Metropolitan University
Department of Nursing

Appendix Three: Ethical approval letter(s)

MANCHESTER METROPOLITAN UNIVERSITY
FACULTY OF HEALTH, PSYCHOLOGY AND SOCIAL CARE

M E M O R A N D U M

FACULTY ACADEMIC ETHICS COMMITTEE



To: Lee Yarwood-Ross

From: Prof Jois Stansfield cc Prof Carol Haigh

Date: 04.02.13

Subject: Ethics Application 1167

Title: *An exploration of the impact of combat-related lower-limb amputation upon self-identity in men (working title)*

Thank you for your application for ethical approval.

The Faculty Academic Ethics Committee review process has recommended approval of your ethics application.

We wish you every success with your project.

Prof Carol Haigh and Prof Jois Stansfield
Chair and Deputy Chair
Faculty Academic Ethics Committee

MANCHESTER METROPOLITAN UNIVERSITY
FACULTY OF HEALTH, PSYCHOLOGY AND SOCIAL CARE

M E M O R A N D U M

FACULTY ACADEMIC ETHICS COMMITTEE



To: Lee Yarwood-Ross

From: Prof Jois Stansfield

Date: 26/04/2013

Subject: Amended Ethics Application 1167

Title: An exploration of the impact of combat-related leg amputation upon self-identity in men

Thank you for your application for amendments to your original ethical approval application.

The Faculty Academic Ethics Committee review process has recommended approval of your amendments.

We wish you every success with your project.

Prof Carol Haigh and Prof Jois Stansfield
Chair and Deputy Chair
Faculty Academic Ethics Committee

MANCHESTER METROPOLITAN UNIVERSITY
FACULTY OF HEALTH, PSYCHOLOGY AND SOCIAL CARE

M E M O R A N D U M

FACULTY ACADEMIC ETHICS COMMITTEE



To: Lee Yarwood-Ross

From: Prof Jois Stansfield

Date: 03/06/2013

Subject: Amended Ethics Application 1167

Title: An exploration of men's experiences of combat-related lower-limb amputation

Thank you for your application for further amendments to your original ethical approval application.

The Faculty Academic Ethics Committee review process has recommended approval of your amendments.

We wish you every success with your project.

Prof Carol Haigh and Prof Jois Stansfield
Chair and Deputy Chair
Faculty Academic Ethics Committee

MANCHESTER METROPOLITAN UNIVERSITY
FACULTY OF HEALTH, PSYCHOLOGY AND SOCIAL CARE

M E M O R A N D U M

FACULTY ACADEMIC ETHICS COMMITTEE



To: Lee Yarwood-Ross

From: Prof Jois Stansfield

Date: 03/06/2013

Subject: Amended Ethics Application 1167

Title: An exploration of men's experiences of combat-related lower-limb amputation

Thank you for your application for further amendments to your original ethical approval application.

The Faculty Academic Ethics Committee review process has recommended approval of your amendments.

We wish you every success with your project.

Prof Carol Haigh and Prof Jois Stansfield
Chair and Deputy Chair
Faculty Academic Ethics Committee

MANCHESTER METROPOLITAN UNIVERSITY
FACULTY OF HEALTH, PSYCHOLOGY AND SOCIAL CARE

M E M O R A N D U M

FACULTY ACADEMIC ETHICS COMMITTEE



To: Lee Yarwood-Ross

From: Prof Jois Stansfield

Date: 25/07/2013

Subject: Amended Ethics Application 1167

Title: An exploration of veteran's experiences of combat-related limb amputation and life after injury

Thank you for your application for amendments to your original ethical approval application.

The Faculty Academic Ethics Committee review process has recommended approval of your amendments.

We wish you every success with your project.

Prof Carol Haigh and Prof Jois Stansfield
Chair and Deputy Chair
Faculty Academic Ethics Committee

Using extant literature in a grounded theory study: a personal account

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Peer review
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Abstract

Aim To provide a personal account of the factors in a doctoral study that led to the adoption of classic grounded theory principles relating to the use of literature.

Background Novice researchers considering grounded theory methodology will become aware of the contentious issue of how and when extant literature should be incorporated into a study. The three main grounded theory approaches are classic, Straussian and constructivist, and the seminal texts provide conflicting beliefs surrounding the use of literature. A classic approach avoids a pre-study literature review to minimise preconceptions and emphasises the constant comparison method, while the Straussian and constructivist approaches focus more on the beneficial aspects of an initial literature review and researcher reflexivity. The debate also extends into the wider academic community, where no consensus exists.

Review methods This is a methodological paper detailing the authors' engagement in the debate surrounding the role of the literature in a grounded theory study.

Discussion In the authors' experience, researchers can best understand the use of literature in grounded theory through immersion in the seminal texts, engaging with wider academic literature, and examining their preconceptions of the substantive area. The authors concluded that classic grounded theory principles were appropriate in the context of their doctoral study.

Conclusion Novice researchers will have their own sets of circumstances when preparing their studies and should become aware of the different perspectives to make decisions that they can ultimately justify.

Implications for research/practice This paper can be used by other novice researchers as an example of the decision-making process that led to delaying a pre-study literature review and identifies the resources used to write a research proposal when using a classic grounded theory approach.

Keywords Qualitative research, grounded theory, grounded theory methodology, literature review, research proposal

Introduction

The timing of a literature review and the general use of extant literature in grounded theory methodology are controversial issues among methodological texts and the wider academic community (Dunne 2011, Giles *et al* 2013). This article provides a personal account of the decision-making process in a doctoral study that resulted in the adoption of classic grounded theory principles relating to the use of literature.

A brief overview of the origins of grounded theory is presented, the conventional approach to a literature review is acknowledged and the authors' approach provided. The paper then explores perspectives on the role of the literature in the grounded theory process, discusses the relative merits of entering the study with a research question or a research interest, and describes the authors' experiences of writing their research proposal.

Background

Grounded theory originated in a study of dying in hospitals (Glaser and Strauss 1965), which led to Glaser and Strauss publishing the books *Awareness of Dying* (1965) and *The Discovery of Grounded Theory* (1967). Glaser and Strauss viewed this as a response to the overemphasis on verifying theory that they felt dominated sociology at the time. Specifically, they challenged the hypothetico-deductive approach to research, which insisted on clear-cut theories or hypotheses that tended to take place before researchers collected data, and argued instead that hypotheses should come from the data through a systematic process. They described initial techniques, such as 'constant comparison' and 'theoretical sampling', that could be used to build theory that would 'fit and work' (Glaser and Strauss 1967). These procedures are interlinked and guide the cyclical process of data collection and analysis (Figure 1). Constant comparison means that incidents in the empirical data are coded and constantly compared with previously developed codes to generate categories; concurrently, theoretical sampling decisions are made about what data to collect next and where they can be found, to saturate the emerging categories developing from the analysis (Glaser and Strauss 1967, Giske and Artinian 2007).

Glaser and Strauss's collaboration ended after Glaser and Strauss (1967) but they continued to develop the methodology separately, later demonstrating different views about how to develop a grounded theory (Strauss and Corbin 1990, Glaser 1992). Consequently, grounded theories

have tended to be labelled 'Glaserian' or 'Straussian' to distinguish between the approaches (Stern 1994). The terms 'classic grounded theory' and 'classic GT' are now frequently used to denote Glaser's approach (Simmons 2011).

The differences between Glaser's and Strauss's methods can be viewed more as methodological than ontological or epistemological (Heath and Cowley 2004). Charmaz (2006) introduced an alternative approach to grounded theory that uses a constructivist philosophy. Therefore, three main approaches exist in grounded theory methodology:

- Classic.
- Straussian (with Corbin).
- Constructivist.

Choosing methodology

Breckenridge *et al* (2012) highlighted the methodological mire that researchers face in deciding which version of grounded theory to use. It is important for researchers to be aware of the methodologies' inherent differences, as this helps in adopting an approach that aligns with their philosophical beliefs about inquiry, ultimately one that they can justify (Annells 1996, Cooney 2010, Evans 2013). A clear difference deduced from the seminal texts relates to their attitudes towards the use of extant literature. This has been the subject of serious debate (Gibson and Hartman 2014). Backman and Kyngäs (1999) advised novice researchers to consider how familiar they become with the extant literature before their study begins.

Before we began our research project, we acknowledged that a conventional literature review of the area chosen for research is usually undertaken. However, at this early stage, we were only interested in carrying out a qualitative study surrounding combat-related limb loss, so we began by increasing our awareness of methodologies that could guide a study of this nature. After considering different qualitative approaches, we identified grounded theory as a suitable methodology, as it seeks to develop a theory focused on the actions and behaviours of participants, and embraces the use of diverse data sources (Creswell 1998, Birks and Mills 2011).

We then anticipated carrying out a literature review surrounding limb loss to identify a research question. Further reading of the seminal texts clearly showed that the use of extant literature was a contentious issue, and we explored in more detail.

Exploring the methodological literature

Glaser and Strauss (1967) focused on building theory from data and advised researchers to

Figure 1 Constant comparison and theoretical sampling processes

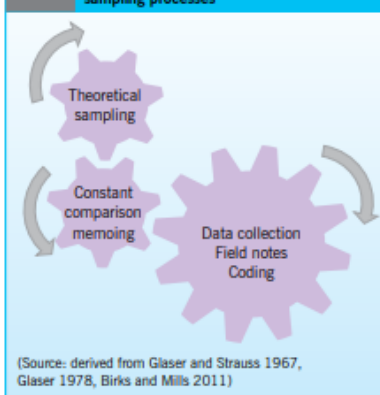


Table 1 Approaches to the use of literature

Classic grounded theory	Straussian grounded theory	Charmaz (constructivist) grounded theory
A pre-study literature review in the substantive area and closely related areas should be avoided.	An early review of the literature is advocated, but there is no need to review all the literature in the field.	Acknowledges delaying the literature review to allow researchers to articulate their ideas. However, tends to focus on the expectation of a literature review in the research.
Extant literature is incorporated through comparative analysis when the core category emerges and the theory is well developed	Engagement with the literature is ongoing. The literature can be used as a secondary source of data or for comparisons with the data.	Extant literature can help the researcher clarify ideas and make comparisons. Sensitising concepts can be used as points of departure.
Extant literature in the early stages can introduce preconception and detracts the researcher's attention from what is going on in the data.	Extant literature can hinder creativity if it stands between the researcher and the data.	Extant literature should be used without letting it stifle creativity or strangle the theory.
If a literature review is performed then it should be incorporated into the analysis as data.	The literature can direct theoretical sampling, and help with concept development and defining properties and dimensions.	The literature helps to demonstrate grasp of relevant works, and identify significant findings and connections between the research and earlier studies.

'ignore the literature of theory... in order to assure that the emergence of categories will not be contaminated'. Historically, a literature review was not advocated, although Strauss (1987), Strauss and Corbin (1990, 1998), and Glaser (1978, 1992) demonstrated different opinions on how and when existing literature should be incorporated. More recently, Charmaz (2006) has also added to this debate (Table 1).

Strauss and Corbin (1998) advocated undertaking an early literature review but explained that there is 'no need to review all of the literature in the field beforehand' and focused on the advantages of using extant literature in a grounded theory study. Glaser (1992) disagreed and advised that 'there is no need to review any literature in the substantive area under study' before the research begins. Instead, the researcher should begin by collecting and analysing the empirical data, and refrain from consulting the extant literature until the later stages of the grounded theory process. Charmaz (2006) acknowledged that the place of a literature review in grounded theory is conflicted and debatable, but advocated withholding where possible the literature review until the writing-up stage, as a way to avoid seeing the data 'through the lens of earlier ideas'.

Through this immersion in the methodological literature, we developed a better awareness of each

perspective and discovered there is no consensus about whether engaging with the extant literature is beneficial or detrimental in producing a grounded theory. Gibson and Hartman (2014) highlighted that the crux of the debate is the problem of preconceptions from the literature and the effects these might have on the grounded theory process. In classic GT, minimising preconceptions is crucial, and initially avoiding extant literature reduces the risk that researchers will become weighed down by irrelevant concepts. Conversely, the Straussian and constructivist approaches do not view this as problematic, as long as researchers maintain a critical and reflexive attitude towards the literature.

Two commonalities do exist between the different methodologies: first, that the extant literature will be incorporated in the grounded theory process at some point; and second, that theoretical development should be guided by the concepts emerging from the empirical data rather than the concepts in the literature (Heath and Cowley 2004). Urquhart (2013) summarised this effectively by emphasising that 'we should seek to see what the data indicates, rather than shoehorn it into a theory that already exists'.

Adopting a position of 'theoretical agnosticism' (Henwood and Pidgeon 2003) may be the best advice to researchers who are using grounded theory methodology. This stance is recognised in the wider

academic community (DiStefano and Cayetano 2011, Furniss *et al* 2011), which encourages researchers to take a critical approach to the literature and only incorporate theories and ideas that have earned their way into the analysis (Simmons 2011).

Preconceptions under the microscope

The issue of preconceptions relates to researchers' existing knowledge, experience and feelings about the research topic, and how these can create bias in the interpretation of the data (Glaser 1978, Dey 2007). In this study the lead author, as a district nurse, possessed professional knowledge of civilian limb loss and was mindful that his experiences might influence the research into exploring inappropriate areas. McGhee *et al* (2007) and Scott (2009) expressed a similar concern in their studies.

Bruce (2007) stated that responsible researchers should be explicit about their theoretical understandings before beginning the research. To achieve this, researchers can reflect on their thinking through discussion with a colleague or by writing down their thoughts (Champlin 2009). Birks and Mills (2011) advised researchers to articulate their assumptions to reduce the impact that their knowledge of the substantive area might have on the study. Following this advice, the lead author wrote down his professional experiences of limb loss, which highlighted significant knowledge surrounding people's reactions to amputation.

Heath and Cowley (2004) stated that it was common for nurse researchers to be familiar with the area they are researching and advised against any further reading in the initial stages if this is the case. Dey (1993) added that the issue of prior understanding relates to how researchers then use their knowledge in the research. Gibson and Hartman (2014) advised researchers to 'bring the baggage and constantly refer to it', and Urquhart (2007) agreed that by demonstrating self-awareness, researchers can show they have knowledge of the field without imposing it on the data. An example is provided by Breckenridge *et al* (2012), who memoed and compared personal experiences and perceptions with other data as another perspective throughout the research. Adopting a reflexive approach (Cutcliffe 2000, Neill 2006) while adhering to constant comparison can avoid forcing 'non-scientifically related interpretations and connections' (Glaser 1998).

During our research we deemed this an effective way to manage prior knowledge and ongoing understandings of the substantive area. We acknowledged that prior understanding of limb loss could not be erased – nor should it be – and that

we would ultimately enter the field with an 'open mind, not an empty head' (Dey 1993).

McGhee (2005) pointed out that researchers do have control over what is added to their existing knowledge base, and we agreed with the viewpoint that becoming too well acquainted with extant ideas may result in 'testing hypotheses, either overtly or unconsciously' (Suddaby 2006). We concluded that increasing the level of knowledge through reading extant theories surrounding limb loss was an unnecessary distraction and a possible barrier to gaining insight (Heath 2006). We considered that avoiding the extant literature was a way to minimise any further preconceptions in the initial stages of the study and to discover concepts from the data (Glaser 1978). By doing this, we could generate a theory that was grounded in the empirical data (Hickey 1997) and compare it with the extant literature later on in the research. This approach appears to resonate with the view of grounded theory held by Suddaby (2006), who aimed to strike a balance between a 'theory-laden view of the world and an unfettered empiricism'.

Choosing to avoid engagement with the theoretical literature surrounding limb loss subsequently led us to examine the seminal texts further for guidance in defining the scope of our research.

Getting started: research question or research interest?

Conducting pre-study literature reviews helps researchers to define their research question, but in grounded theory it is the use of the literature in the early stages of a study that causes considerable debate (Birks and Mills 2011). We needed to decide whether our study would proceed with a specific research question (problem) or research interest.

Strauss and Corbin (1998) advocated formulating research questions through personal and professional experience, and technical and nontechnical literature. They provided examples of suitable research questions, such as 'How do women manage pregnancies complicated by a chronic illness?' or 'What happens when a patient complains of being in pain but the nurse does not believe him or her?' Formulating a research question in this way is similar to the traditional method in which researchers determine before they enter the field the problem that they will investigate.

Similarly, Charmaz (2006) supported the idea of identifying the research problem in constructivist GT through personal assumptions, disciplinary perspectives and the use of sensitising concepts. As an example, she provided her own prior interests

in chronic illness relating to how people experienced time and how they were affected by their chronic illness. Her interest in time led her to use the sensitising concept of 'duration' in the study, but this was only a starting point, and she would have discarded it if she found it to be irrelevant in the data. Constructivist GT also advocates having a predetermined research question, but researchers should ultimately follow where the data lead them during analysis (Charmaz 2006).

Conversely, in classic GT, a researcher enters the field with nothing more than a general 'wonderment of what is going on' (Glaser 1992) in an area of interest, trying to identify the participants' main concern and how it is being resolved or processed. Consequently, Christiansen (2008) explained that as the research problem is discovered from the empirical data, a literature review is a waste of time. Researchers using classic GT will not ignore the literature; instead, they will be directed to relevant literature in the later stages of the research when the core category has emerged (Glaser and Holton 2004). One example of this is provided by Giske and Artinian (2008), who identified a core category of 'preparative waiting' to explain how patients underwent diagnosis in a gastroenterology ward. After developing their theory, they then carried out a literature review, compared their findings with extant theories, and incorporated relevant literature as data for their theory.

More recently, Glaser (2011) reiterated that extant concepts and ideas are valuable to the grounded theory – as in Giske and Artinian (2008) – but not until the data have had the opportunity to direct the researcher. The research questions posed by Strauss and Corbin (1998) are preconceptions of a research problem that may be of little relevance to participants (Cutcliffe 2005). Gibson and Hartman (2014) detailed some suitable alternatives that would suit a classic GT study, such as 'What are the primary concerns of midwives when birthing happens in home settings?' or 'What are the main concerns of dentists and patients in dental encounters?' The research questions are purposely less structured and participants' concerns are not predetermined; instead, they are generated by doing grounded theory (Glaser 1998).

Although Strauss and Corbin (1998) appeared to prioritise researchers using the literature to predetermine a research problem, they also supported researchers having a general interest in a research area. They acknowledged that researchers may enter the field with general notions but no research problems, and advised that 'paying attention to respondents' concerns is the key to where the focus of a research project should be'.

Charmaz (2006) cited her study of chronic illness in which participants identified an important concern (disclosing illness) that she had not foreseen before conducting the research. Similarly, Hickey (1997) detailed how his initial literature review led him to presume when he entered the field that district nurses would identify 'care management' as the main issue in their practice. However, very early in analysis, he recognised that this was not a relevant concern for them. These situations indicate that researchers are unlikely to know what will be discovered in advance, even if the nature of a study is predetermined, and they will be directed to appropriate literature as the theory develops. Andrews (2006) illustrated this: his study explored how nurses recognised patients' worsening conditions, and relevant literature surrounding argumentation theory and the subjective nature of evidence was integrated into the study – something that could not have been anticipated in advance.

This approach to grounded theory appealed to us, as we had no prior intention to investigate a particular aspect of limb loss. Instead, we wanted to explore the concerns of veteran amputees from their perspectives. We deemed that a general interest in the concerns of amputees affected by combat-related limb loss would be an appropriate starting point for gaining insight into their lives, which would then guide us to relevant literature.

Consequently, our refraining from pre-framing a research question using professional knowledge, and carrying out a pre-study literature review of the area of limb loss, had the potential to help us:

- Avoid preconceived concerns that may not exist for amputees in the substantive area.
- Avoid importing irrelevant concepts and ideas from extant theories.
- Be open to the discovery of concepts from the empirical data.

Entering the field with a research interest and delaying engagement with the extant literature adhered more closely to the principles of a classic GT perspective. However, as this was a doctoral study, it was necessary to write a research proposal that would satisfy the university research committee.

Writing a research proposal using classic GT

Incorporating a literature review into a research proposal is often a standard requirement in the doctoral process (Dunne 2011, Uruqhart 2013), so approaching a study using classic GT with nothing more than general wonderment can lead to difficulties, as there is no defined research question (Cutcliffe 2005). Sandelowski *et al* (1989) recognised

this problem and explained that writing a proposal for research involving an emergent design 'compels the investigator to negotiate the paradox of planning what should not be planned in advance'.

In reality, this may not be problematic if the committee is familiar with the processes of classic GT and understands the emergent nature of the approach; otherwise, there may be a delay in gaining approval for the study. From the researcher's perspective, this can be frustrating when there is a desire to adhere to the basic tenet of the approach, but understandably the reviewer of the proposal needs to be convinced that the research is feasible. Ultimately, well-written research proposals will justify the use of the methodology, regardless of the use of extant literature.

Glaser's dictum of delaying engagement with the literature in the substantive area may be intended only to help the researcher stay open to discoveries from the data; however, novice researchers often view the dictum as a justification for ignoring the literature entirely (McCallin 2003). This may arise because of a lack of reading of the seminal texts (Suddaby 2006) which acknowledge that the researcher needs to undertake a literature review, although classic GT requires that it be conducted later in the research. In particular, Glaser (1998) stated that 'fighting these requirements can be a useless waste of time' and researchers should 'do what the people want'. Therefore, in classic GT more emphasis is placed on it being ideal to avoid a literature review to minimise preconceptions (Hickey 1997), but if this is impossible, researchers should use the literature provided in the proposal as data for constant comparison to determine its relevance (Glaser 2001, Birks and Mills 2011). Similarly, May (1994) emphasised that prior knowledge should be incorporated as it if were another informant, which confirms that the literature should not be viewed as superior or treated any differently to the empirical data.

Doctoral students often choose grounded theory methodology after completing their research proposal, so they have already engaged with the literature to varying depths (Elliott and Higgins 2012). Nonetheless, a proposal should be viewed as no more than a framework to get started (Artinian 2009), and researchers are likely to carry out a second, more relevant literature review to integrate the theory (Andrews 2006). Researchers must learn to disassociate themselves from existing concepts and ideas, which can take a considerable amount of time (Nathaniel 2006), but it is necessary as grounded theory cannot be 'simultaneously emergent and built on concepts from the literature' (Heath and Cowley 2004).

If a researcher has not proceeded to a literature review as a routine course of action, advice is available on ways to tailor the research proposal. Some guidelines can be found in the seminal texts (Glaser 1992, 1998), and Guthrie and Lowe (2011) dedicated a chapter to writing a research proposal using classic GT. They reiterated the need to conform to institutional requirements but provided guidance for doctoral studies when a literature review is required or where the institution is more flexible. If a literature review is needed, Urquhart (2013) recommended carrying out a non-committal literature review that includes some engagement with extant theories, but does not try to impose from the outset a theoretical framework on data collection (Urquhart and Fernandez 2006).

In our department, an in-depth literature review was not a prerequisite for registering the PhD, so we considered the situation ideal. The challenge still remained of formulating a proposal that provided sufficient justification for the study while avoiding becoming too familiar with the extant literature surrounding limb loss. The resources provided by Guthrie and Lowe (2011) helped us structure the proposal by specifying and focusing on the methodological procedures we would use in the research to generate the theory.

The fine line between not conducting a literature review and focusing the study on our area of interest was acknowledged (McCallin 2003, Hallberg 2010), and there was ultimately a need to be pragmatic to gain approval for the study. We performed an initial literature search to demonstrate awareness of what research had already been conducted in relation to combat amputation (Hart 2001), which is a strategy that has also been used in the wider literature (Heath 2006, Cone and Artinian 2009). We restricted the search to look only at abstracts and, to make the task manageable, we decided to focus initially on combat-related limb loss in the Iraq and Afghanistan conflicts, as it was a current and topical issue. We might have gleaned themes from reading the abstracts, but there was a dearth of qualitative research, which clearly indicated a gap in the literature.

To strengthen the case for the study, we incorporated statistical information from Murrison (2011), emphasising the increasing number of amputees being medically discharged from the armed forces with complex needs. Consequently, our study would contribute knowledge to the under-researched area of combat amputation. This enabled us to fulfil the procedural requirements for the research proposal and avoid engagement with the theoretical literature.

Conclusion

This paper has explored the debate surrounding the role of extant literature in grounded theory methodology and has provided a personal account of the steps that led to our decision to use classic grounded theory principles in a research study. This decision resulted in delaying a pre-study literature review in the substantive area of limb loss and starting the research

without a predetermined research question. Subsequently, the resources available in the wider literature were used to assist us in writing a research proposal to meet the specific institutional requirements and also adhere to the tenets of a classic grounded theory approach. This article is offered as advice to others choosing grounded theory methodology in the context of a doctoral study.

Online archive

For related information, visit our online archive and search using the keywords

Conflict of interest
None declared

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Appendix Five: Literature searches

Literature searches	
Justification	<p>In order to complete the research proposal literature searches were carried out to demonstrate an awareness of the empirical research available in relation to combat-related limb-loss.</p> <p>In-line with classic Grounded Theory (GT) principles, an in-depth literature review on the substantive area was delayed, as a way to allow the emergent theory to determine what literature would be relevant (Urquhart and Fernandez, 2013). I immersed myself in the methodological debate surrounding the use of extant literature in a GT study and a discussion is provided in chapter two.</p>
Key search terms	Military amputees, military limb-loss, military amputation, Iraq amputation, Afghanistan amputation, combat amputation, Headley Court, Walter Reed, military rehabilitation, military recovery.
Databases	Royal College of Nursing (RCNi), Google Scholar, CINAHL, British Nursing Index, Cochrane Library, Web of Science (WOS), OVID Journal Index, Scopus, ProQuest, JSTOR, ScienceDirect, Wiley Online Library, EBSCOhost, PsycINFO, NHS Evidence..
	Developing Theoretical Sensitivity
Justification	<p>Literature searching was undertaken during data analysis, and was guided by the emerging categories and properties. As the study progressed, my theoretical sensitivity increased as I was able to discover analytical possibilities in my developing theory and compare them to the available literature (Birks and Mills, 2015). In do so, it became clear that my findings contributed further understanding of veterans' experiences of limb-loss. This process was facilitated through the memo writing.</p>

Key search terms	Military amputees, military limb-loss, military amputation, Iraq amputation, Afghanistan amputation, combat amputation, Headley Court, Walter Reed, military rehabilitation, military recovery, acceptance theory, acceptance chronic illness, loss and bereavement theory, self-identity, identity theory, uncertainty, uncertainty in illness theory, uncertainty management theory, chronic illness, social comparison theory, meaning-making, amputation resilience.
Databases	Royal College of Nursing (RCNi), Google Scholar, CINAHL, British Nursing Index, Cochrane Library, Web of Science (WOS), OVID Journal Index, Scopus, ProQuest, JSTOR, ScienceDirect, Wiley Online Library, EBSCOhost, PsycINFO, NHS Evidence,
	Nesting the substantive theory with extant literature
Justification	A focused literature review of 'facing losses' was carried out when the theory had been developed, in order to situate the theory in the extant literature and demonstrate its contribution to knowledge.
Key search terms	Military amputees, military limb-loss, military amputation, Iraq amputation, Afghanistan amputation, combat amputation, Headley Court, Walter Reed, military rehabilitation, military recovery, acceptance theory, loss and bereavement theory, self-identity, identity theory, uncertainty, uncertainty in illness theory, uncertainty management theory, chronic illness, amputee acceptance, acceptance chronic illness, social comparison theory, medical model disability, social model disability, veteran medical discharge, amputee resilience meaning-making, finding meaning.
Databases	Royal College of Nursing (RCNi), Google Scholar, CINAHL, British Nursing Index, Cochrane Library, Web of Science (WOS), OVID Journal Index, Scopus, ProQuest, JSTOR, ScienceDirect, Wiley Online Library, EBSCOhost, PsycINFO, NHS Evidence.

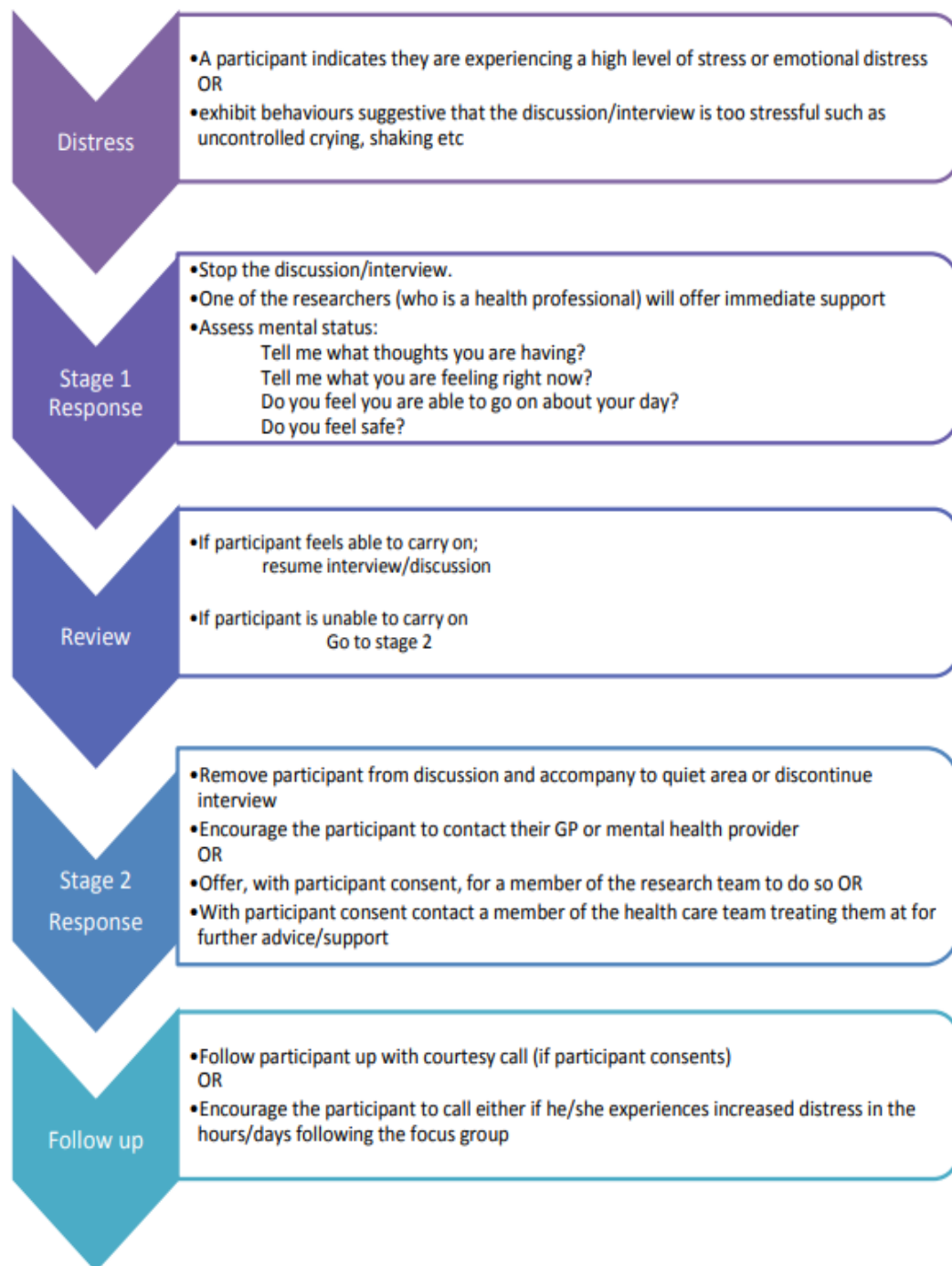


Distress Protocol for qualitative data collection

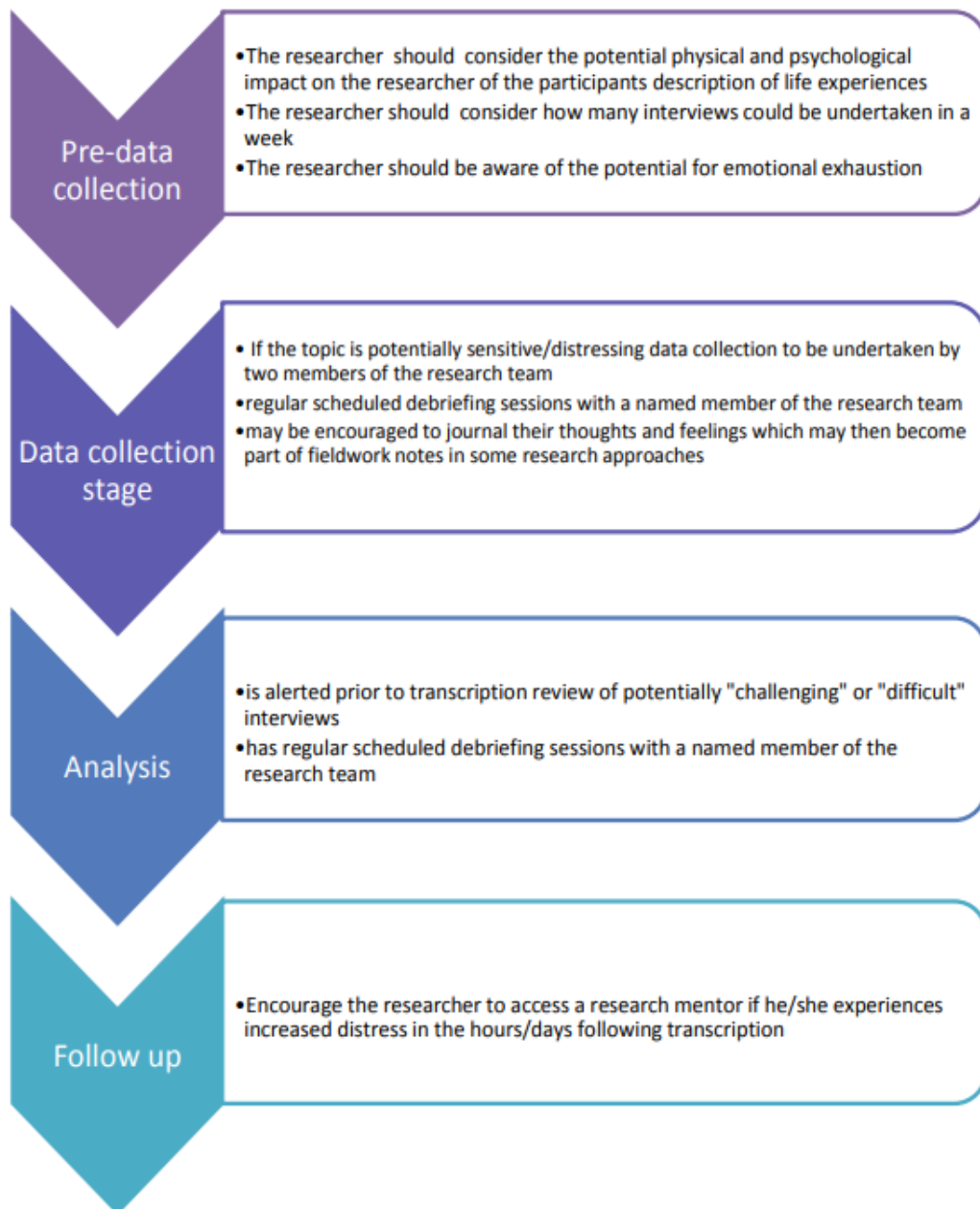
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&
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Review date 2015

Distress Protocol 1: The protocol for managing distress in the context of a research focus group /interview
(Modified from : Draucker C B, Martsof D S and Poole C (2009) Developing Distress Protocols for research on Sensitive Topics.
Archives of Psychiatric Nursing 23 (5) pp 343-350)

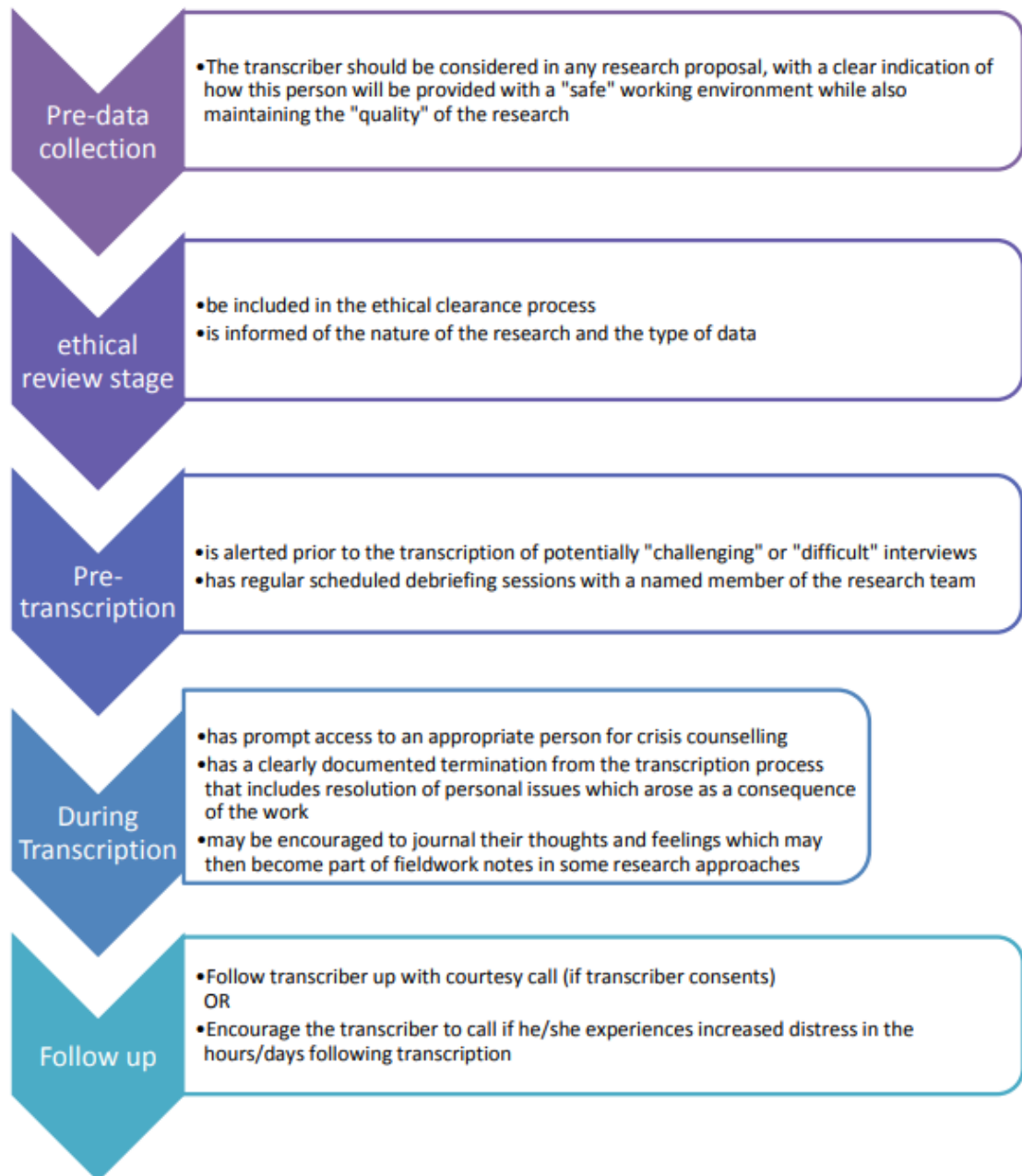


Distress Protocol 2: The protocol for managing distress in the context of a research focus group /interview management
McCosker, H. Barnard, A. Gerber, R. (2001). Undertaking Sensitive Research: Issues and Strategies for Meeting the Safety Needs of All.
Forum: Qualitative Social Research, 2(1)



Distress Protocol 3: The protocol for managing distress in the context of a research focus group /interview transcription

(Gregory, D Russell, C Phillips, L (1997). Beyond textual perfection: transcribers as vulnerable persons. Qualitative Health Research, 7(2), 294-300.)



Appendix Seven: Demonstrating a chain of evidence over a number of cases in the category of ‘dealing with uncertainty’ (online/offline interviews)

Properties	Interview 1	Interview 2	Interview 3	Interview 4	Interview 5	Interview 6	Interview 7	Interview 8
Fearing the worst	X	X	X	X	X	X	X	X
Getting reassurance	X	X	X	X	X	X	X	
Being altruistic	X	X	X	X	X	X	X	X
Experiencing distress	X		X		X	X		X
Questioning relationships	X	X	X	X	X	X	X	X
Selflessness	X		X	X	X	X	X	X
Disconnecting from comrades	X	X	X	X	X	X	X	X
Awareness of other amputees	X	X	X			X		
Receiving confirmation	X			X	X	X	X	X
Making comparisons	X	X	X	X	X	X	X	X
Competing	X	X	X	X	X	X	X	
Using humour and bantering	X	X	X	X	X	X	X	X

